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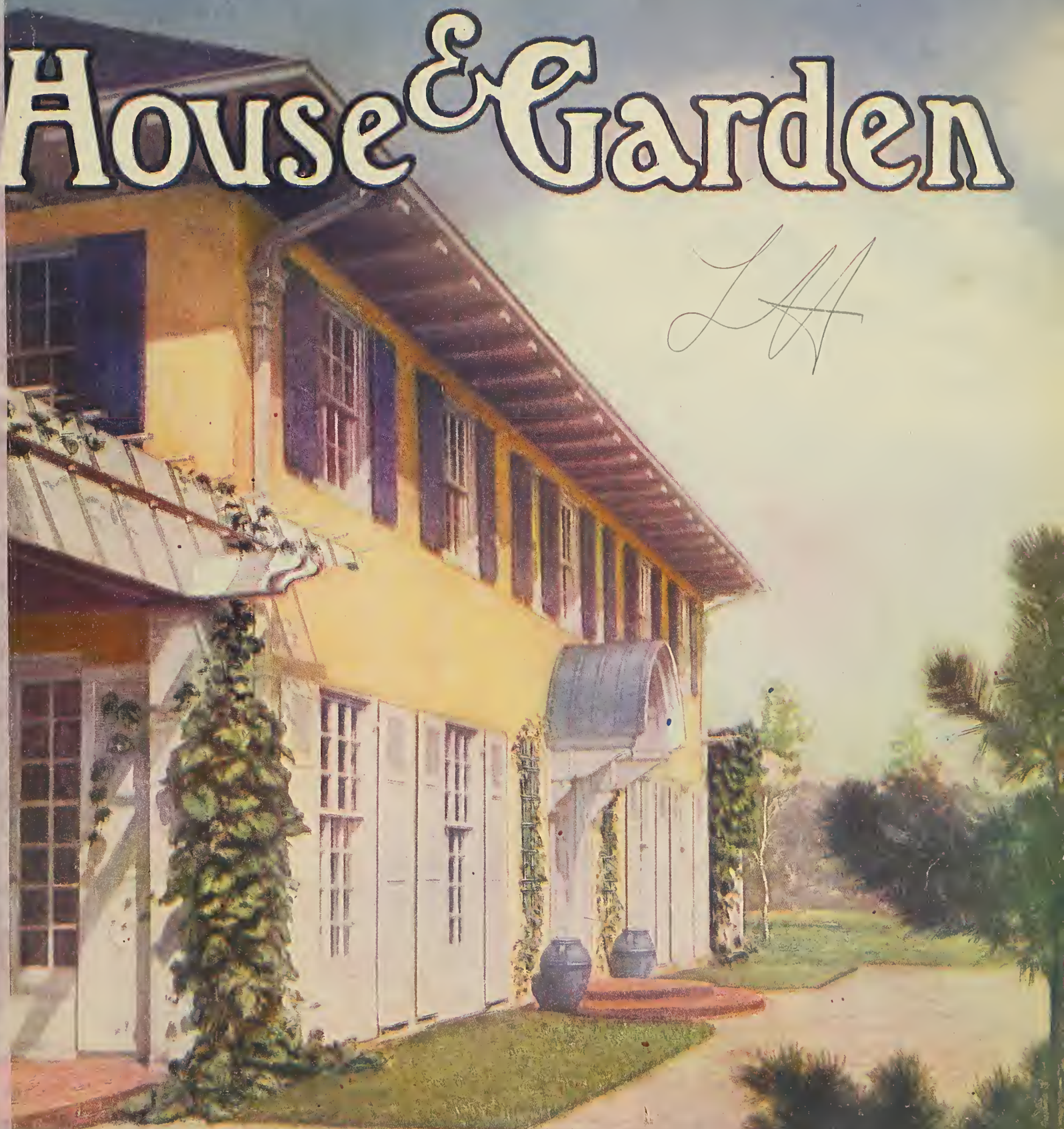
House & Garden



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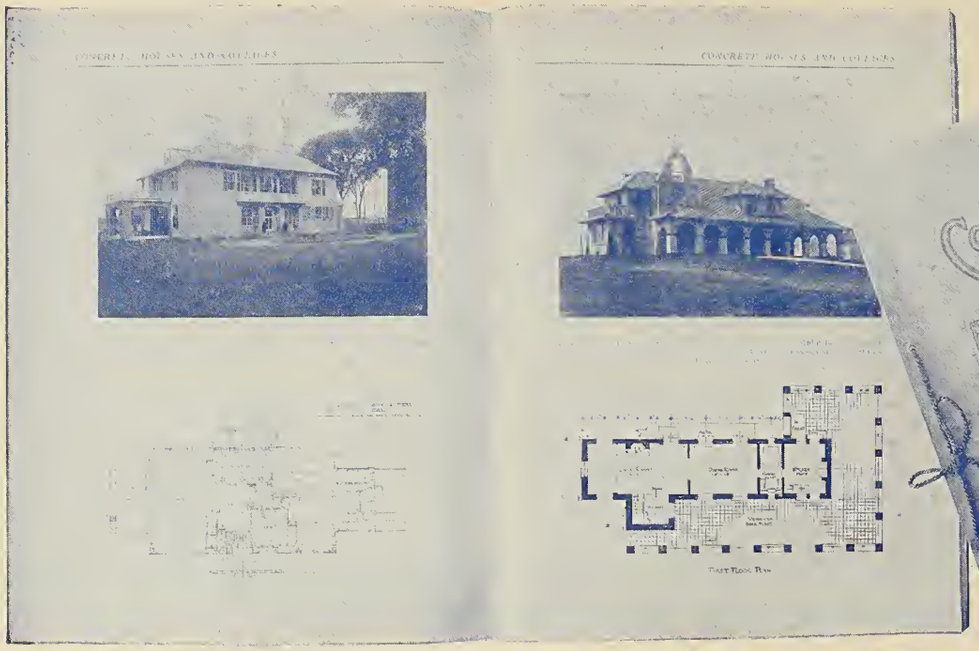

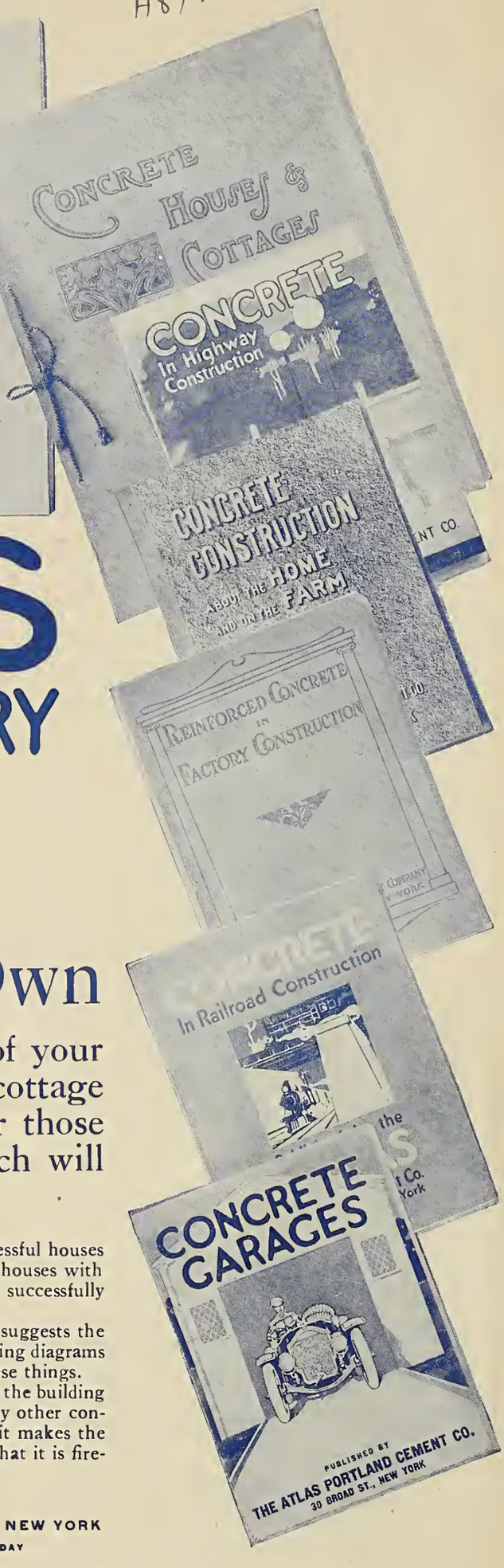

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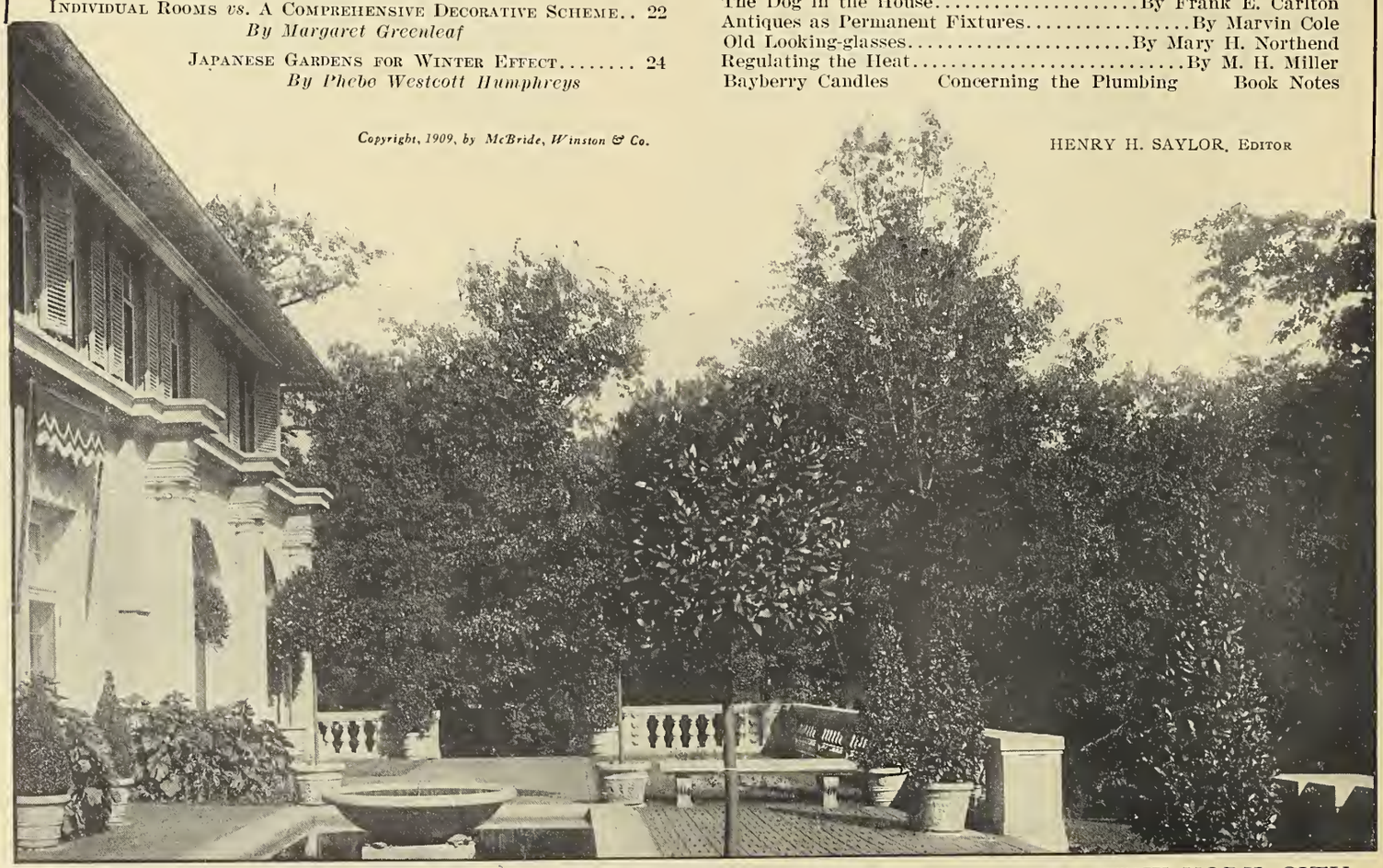
A striking example of what transplanting well grown trees will do for a house; the dwarf cedars break the monotony of the flat Long Island landscape

January 1910 Contents

HENRY H. SAYLOR, EDITOR



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House & Garden

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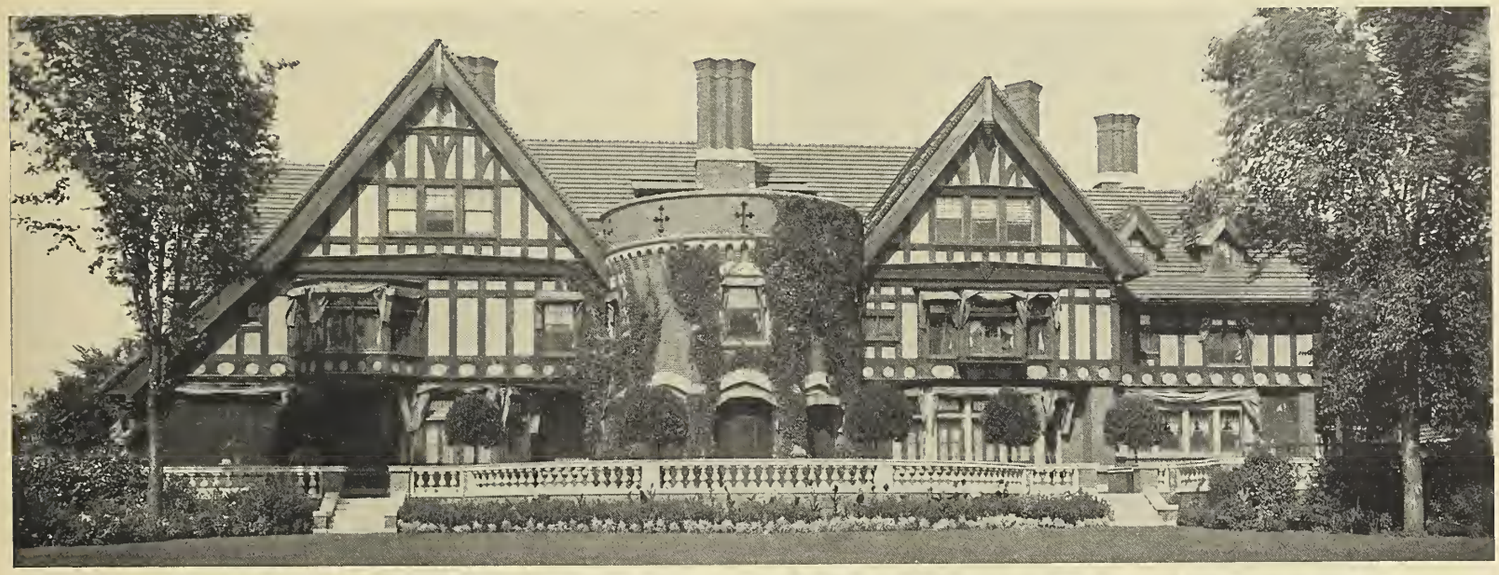


One of the great advantages of half-timber houses is that the windows can be put where wanted; they need not be symmetrically located as in classic design. A residence at Minneapolis, Minn. Harry W. Jones, architect

The Case for the Half-timber House

BY ALLEN W. JACKSON

Photographs by James Huntington, T. E. Marr, Wm. T. Clark and others

The problem of choosing an architectural style for the American country or suburban home is one of the most puzzling that confronts the home-builder. In order to bring about a better understanding of the more common types and with the idea of clarifying, as far as possible, this whole matter, we have asked a number of prominent architects to present each the case for one particular style. In the last issue Mr. Frank E. Wallis, the well known authority on Colonial architecture, told why a house of that type is the only one to build. Mr. Jackson presents herewith the case for Half-timber with as enthusiastic an advocacy. A number of other styles will be explained and illustrated in future issues—the Gambrel-roof, Colonial, Italian Adaptations, Modern English and German Plaster Houses, The Patio Type, and probably one or two others.

LET me warn the young architect about to dine out that, while the first question asked of him may be about the weather, the second will surely be "Why don't architects invent a new style of architecture?"

There may be more than one answer as to why we do not invent a new set of forms out of hand, but if it can be made perfectly clear what an architectural style really is we are provided at the same time with the answer to the question. If it is thoroughly understood that an architectural "style" is but a reflection of a certain type of civilization, is but a mirror of the customs, manners, limitations and environment of a race, showing the slow, painful, process of the growth and development of a people, it ought to be apparent why it is that "styles" are not invented in the study.

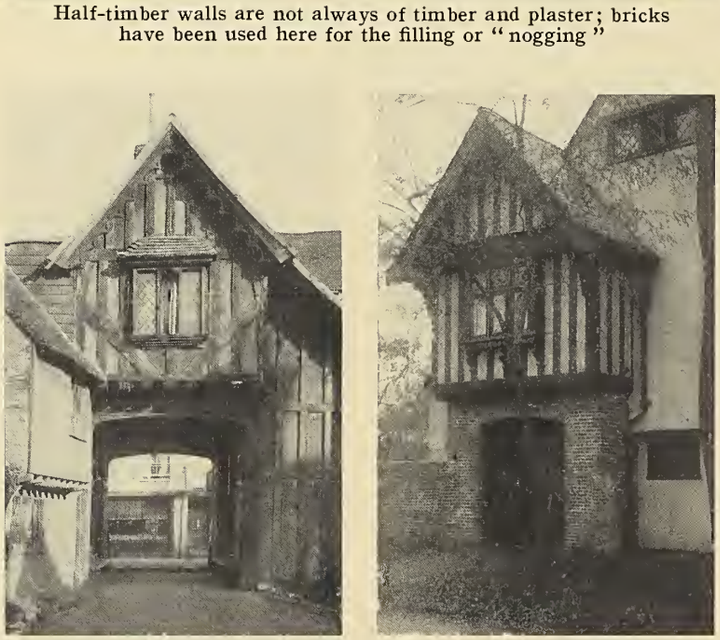
Even when it becomes no longer possible truthfully to reflect the manners and customs, the requirements and desires of a people in the old inherited forms—even then we may not talk of a new style, but of modifications of the current one, the whole problem being one of growth. It is as impossible for us wilfully to repudiate our architecture as it would be our literature. A people's architecture *fits* them, and no one else can wear it. We may admire others, but only our own is flesh of our flesh.

The particular style that *we* have been born into, developed by our forefathers through centuries, keeping pace with the slow, painful progress of the race, always a true index of its contemporary condition, a perfect inarticulate measure of its culture and refinement; this style, this growing embodiment in stone of a people's dreams and idealism, keeping step down through the centuries with the upward march of the race—this for us is the Gothic style of England.

Stone and brick were the materials used for the important work and plaster and timber for the farms and houses of the gentry.

The Georgian style, also brought over to this country, where we know it as the Colonial, was not an indigenous manner of building; it was but an imported fashion, an alien style, as little

Half-timber walls are not always of timber and plaster; bricks have been used here for the filling or "nogging"



Two examples of the same motive, but separated by hundreds of years and thousands of miles

On Mr. Jackson's own house, at Cambridge, Mass., the half-timbering is used sparingly for the parts to be accented

The rambling picturesque quality of half-timber work depends not on symmetry but on balance for its harmonious composition

at home in serving British institutions as one would expect such a typically Italian product to be.

Even if we admit that long custom had served to imbue these borrowed forms with something of the Anglo-Saxon temperament, we still have the inherent unsuitableness of an essentially monumental style of architecture forced to serve intimate, and domestic uses. It is the Arab steed harnessed to the plow. Its simplicity and dignity are all very well but they are bound to a tyrannical symmetry, rigid and immutable.

We all know the Colonial house, the front door in the center flanked on either side by the paired windows above and below; each window the exact size of every other; one-half the front the mathematical counterpart of the other. It may be there is a guest room on one corner and a bath-room on the other, but it never appears on the surface. We might have liked for comfort and convenience to have had three windows on one side and two on the other, or perhaps higher, or smaller, but it will do us but little good to carry our request to this austere front.

Like the unlucky traveler in the bed of Procrustes, the poor plan is made to fit by brute force, either by stretching or lopping off.

Now it is an architectural maxim, that, without regard for style, the elevations of a building shall express the plan, but how is it possible for the meanest and the most honored rooms to be expressed on the exterior by the same thing—the window for instance? If one window is a truthful expression of the one room, how can it possibly be of the other? Working in the derivatives of the classic style as applied to domestic work, not to be able to tell from the outside, the bath-room from the parlor, the butler's pantry from the ball room, is a basic defect of style that forces many undesirable compromises that would be unnecessary in a more flexible and less rigid system. There should not be this conflict between the plan and its elevations by which one must give way to the other, serious sacrifices having to be made before the two can be coaxed into joining hands.

In this feud between Truth and Harmony, Utility stands but a sorry chance.

As has been said, a primary necessity of good architecture is that the elevations shall follow and grow from the plan, that they shall express what they shield; they must be the effect and never the cause. Beauty must wait on Use and is only noble when it serves.

If, then, our exteriors will not subordinate themselves; if they are not perfectly tractable and flexible, it is a weakness, and this weakness is one that we think exists in the classic style, a weakness which never shows so plainly and disastrously as in the manifold exigencies of modern house-building. And it is in this very matter that the strength of the true English work lies. The plaster and half-timber houses, by ignoring symmetry (but never composition) gain at the outset an immense freedom.

The plan may fulfil the most extraordinary requirements, may house the most incongruous matters under one roof; china

This house at Radnor, Pa., Horace Trumbauer, architect, illustrates the possibility of using stone in conjunction with the half-timber plaster work

closets may come next to chapels, pantries under boudoir, yet each have every requirement of light and space exactly fulfilled, with their proper and fitting exterior expression. There is the best possible understanding between the plan and elevation, the understanding that the plan is master and the other must honor and obey.

The results in England, where it is best studied, are those soft, beautiful houses, which affect us by their perfect repose and harmony, rest and simplicity; no stress or striving here, only peace and quiet. They take their place in the landscape more like some work of Nature than of man, nestling among the verdure almost like some larger plant, more as if they grew than as if they were made. Rules of the books, recipes from the schools, seem very thin and profitless in their presence.

These buildings are not dependent on the paint shop or the planing-mill; they are brothers to the soil—what else are the brick and mortar and rough-hewn timber? They are not designed under an artificial rule derived from nothing in nature. Then the adornment of these English houses does not consist of motives invented for use on Greek temples five hundred years before Christ. What detail and ornament they have were invented painfully, lovingly, and slowly through the centuries by the people themselves, improving and bettering as they came up out of their darkness of ignorance and poverty. Eloquent of a people's history, those who live in these houses own them in a very real sense.

As for their use in this country, the utilitarian has no complaint on that score, as they are perfectly suited to our climate. The plaster makes a warmer wall in winter and a cooler one in summer than can be had with only wood. When properly done it is very durable and there is no cost of upkeep. It can be made thoroughly charming in color itself and wonderfully harmonious among the surrounding vegetation.

Of course in considering the modern work one must not expect to find in it the charm and fascination which so delight us in the old English crofts and manors. It is an exceedingly difficult thing to judge architecture *per se*, that is to separate the architecture, the conscious design, entirely from its setting, and pass judgment on it solely as an artistic composition, without regard to the accidental or fortuitous in its surroundings, or to those caressing marks by which we may know that Father Time has passed that way. This added beauty begins where the architect left off, but he is too often given credit for the beauty that is of Nature and not of man—the perfect result that neither may obtain alone. The English cathedrals—were they so beautiful, so noble, so satisfying, when the architect stood off and looked at his finished work, their future history unborn and timid Nature looking on from afar, not yet ready to run up and cling about its base and storm its walls and find a foothold in every cranny? I fear they were not so good then, for every picture is helped by its frame.

Your architect prefers the cathedrals of France, standing in the midst of squalid villages, with the old houses circling thick about the base, clinging to its very skirts. These buildings are

Much of the charm of old half-timber houses results from the use of various materials in combination and in the looseness of construction—notice for instance the uneven spacing of the gable-end timbers

In comparing modern efforts with the old work it is well to bear in mind the latter's great advantage in the mellowing influences of time

Half-timber work admits of great freedom in the design of chimneys. A house near Philadelphia, Lindley Johnson, architect

Your Colonial mansion may be stately and dignified, but can you with rule-of-thumb methods gain the picturesque individuality that half-timber work makes possible? A house at Wellesley, Mass., A. W. Jackson, architect

A house at Merion, Pa., Horace Trumbauer, architect, showing even an un-English piazza is not impossible with this work

less appealing, less soft and beautiful, less picturesque and charming, but they stand without adventitious aid to proclaim and attest the greatness of their designers and builders.

And then to be reckoned with, in its very powerful but extremely subtle appeal to the sensitive mind, is the potent power of age. For time means history, and nothing is more effective in making us feel the presence and reality of the past, in recalling historic events than buildings which saw or may have even sheltered them. The power which such works have of revivifying the former life which surged about them and profoundly affecting and moving the imagination of the onlooker by the subtle aura that hangs about and permeates them, is a force that must be carefully taken into account and guarded against by him who would sit in judgment on architecture.

These pleasant emanations are for the critic illegitimate and must first of all be exorcised, before he is fit to don the ermine.

Let us therefore be a little careful before we are quite sure that our admiration is wisely bestowed and that our old buildings are really so much finer works than any we produce to-day. Let us eliminate Mother Nature and her accessories of verdure and decay, let us forget the singularly happy results she obtains by sagging our roofs and staining our walls, by blunting our edges and playing havoc generally with the specifications. It is all so delightful—but it is not architecture.

In the same way let us banish Father Time from our thoughts, with the rich pageant that follows in his train, and try to discover only what it was our designer had in his heart, what colored his thoughts, what guided his hand, when he stood before his empty field with visions swarming through his mind.

Let us look now at what this English half-timber work was in its birthplace and what we make of it to-day. We shall notice in looking over the illustrations chosen for reproduction that many of the buildings are not entirely done in half-timber. Many of the most successful ones are those that use it in connection with plain plaster or brick, the black and white used as an accent, as a precious thing.

A particularly strong point of the English work is that your Englishman will spend $100,000 and when he is through will have a simple, quiet, modest cottage. We, on the other hand, with half the money at our command, at once try for a palace, Corinthian columns through three stories, and plenty of carved stone. We build the cottage only when we can afford nothing else. But it is pleasant to think that this quiet simple work is becoming more common with us every day. We are coming to recognize its picturesqueness and adaptability to varying conditions of site, its homelike quality and freedom from ostentation. All these considerations act powerfully towards making it the one suitable style for our country homes.

Another example of the half-timber work's picturesque possibilities and the American tendency to use the timbering sparingly

An old example showing the naive carving used for enrichment

A Llewellyn Park, N. J., house, Percy Griffin, architect, where brick takes the place of plaster above the stone base

THE FIREPLACE

by Henry H. Saylor

ESSENTIALS IN THE DESIGN AND CONSTRUCTION OF THIS MOST IMPORTANT FEATURE OF LIVING-ROOM, DINING-ROOM, BEDROOM AND HALL

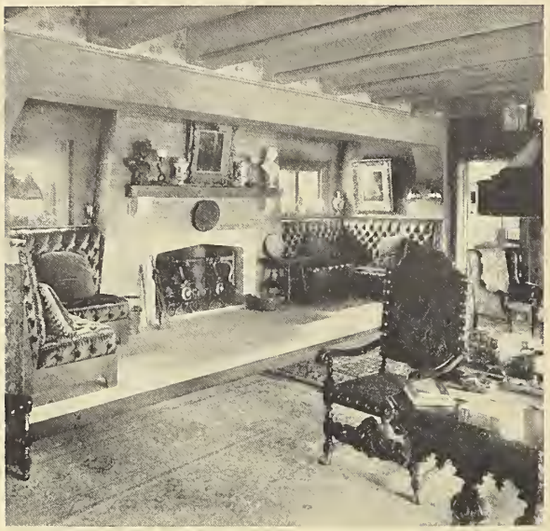
Photographs by J. M. Elliot, C. H. Claudy, M. D. Northend and others

BACK in the fifteenth and sixteenth centuries our ancestors built their wood fires on the stone floor of the great halls and let the smoke find its way out as best it might. The experience of many a new home-owner to-day, coaxing along the first fire on his new hearth, prompts the thought that we might suffer less from the smoke if we did it that way now.

In this South Yarmouth studio a simple wood shelf is the only embellishment of the chimney breast

It is a curious thing, when you turn it over in your mind, that in three centuries of chimney building we have yet to learn, as a race, how to construct a fireplace and flue so that it will do the work expected of it. There *are* fireplaces that do not smoke, of course, but they work in spite of their designers, not because of them. It is an easy matter to make a fireplace draw; simply make the flue large enough and it will draw not only the fire but the fire-tools and a rug or two for good measure. That is the sort our Colonial ancestors built. On a cold night they blistered their toes before the mighty blaze and developed rheumatism and influenza through the mighty wind that rushed past them on its way up the chimney. Ninety per cent of the heat went up the chimney—but then cordwood was to be had for the cutting.

If we are to take real comfort and enjoyment out of our fireplaces we have got to give up this almost universal desire for a *big* fireplace. I have yet to find the man-about-to-build who does not ask at once for "one of those fine big fellows—the kind that burns whole cordwood." I suppose this is based on the assumption that if a small fireplace is a good thing, a great big one is that much better. Well, it isn't. Have your big cordwood blaze, if you like, in your summer shack or seaside bungalow, where the cheer of a roaring fire is the sole desideratum rather than just plain solid comfort. But a big fireplace is too powerful a ventilator for the home living-room; it needs air—a great quantity of it, and the fire will draw it into the room through every crack and crevice of doors and windows to feed the flames. And that means draughts. So take my advice and be content with a fireplace about three feet in width and two and a half feet high. You can construct such a fireplace along scientifically correct lines



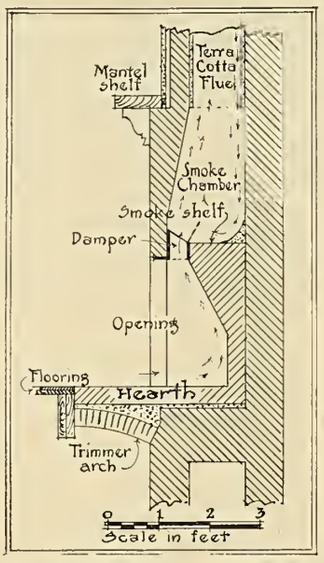
A reinforced concrete beam separates this broad inglenook from the living-room

The seats here are rather too close to the fire for comfort. Make the inglenook seats of box form, with hinged lids, so as to have a convenient space for firewood

The owner has had a lot of enjoyment in making the oak mantel facing and copper hood himself

so that it will not smoke. Moreover, you will get the maximum amount of heat from it into the room instead of up the chimney.

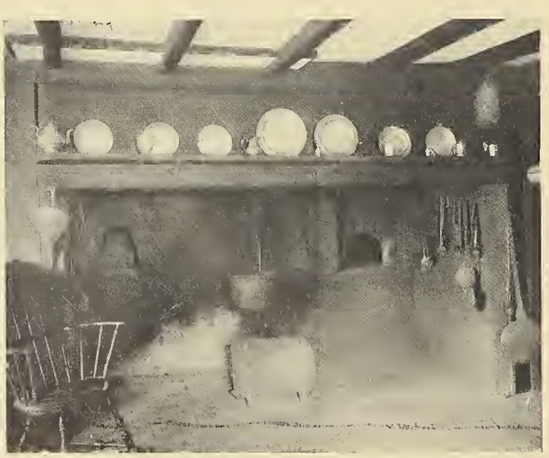
There are two great essentials in a good fireplace. One is the relation between the opening into the room and the flue area—the latter should be one-tenth of the former area; the other is what is called the "smoke chamber," a part that corresponds to the dome on a fire-engine, which is designed to take up and equalize the force of the stream that is pumped intermittently through it. In much the same way the smoke chamber takes up the inequalities of draught and down draught and keeps the smoke going steadily up the chimney. A glance at the diagram will make this clear. The brickwork at the top of a fireplace, just above the opening, is drawn forward to form the "throat"—an opening into the smoke chamber three or four inches deep and the full width of the fireplace opening. This throat contains a cast-iron damper, with a hinged lid as shown. The narrowing of the natural exit passage for the smoke and gases causes these latter to pass through under some pressure and therefore with a distinct force. When the fire is first lighted the column of warm air rises at the front of the flue, causing naturally the down draught of the cold air at the back. If the way were open to it this descending column would reach the fire on the hearth and force the smoke and gases into the room. The "smoke shelf" prevents this, and by its form swirls the cold air around until it is carried into the path of the rapidly ascending warm column and on up the chimney. It is the simplest and most logical thing in the world, yet if you entrust the building of your fireplace to the village mason he will build it any other way but the right one.



This vertical section through the center of a fireplace shows the scientifically correct form for maximum efficiency and no smoke

Many of the Colonists' fireplaces had cavernous smoke chambers above them, and there was usually a door at the side of the chimney breast through which the hams and bacon went to hang in the smoke until cured. When this function of the chamber was no longer employed the chamber itself gradually disappeared and the flues were made larger and larger in misguided efforts to prevent the fireplace from smoking.

Although the proportion between opening and flue and the construction of the smoke chamber are the prime essentials, there are other minor details of the fireplace that must be provided for if we are to have the maximum efficiency. The depth of the fire chamber should be one-half the width and the sides and back should slope so as to reflect the heat out into the room.



The cavernous kitchen fireplaces of our Colonial ancestors were picturesque but needlessly large

A large stone projects to form a hob. The hearth is of cement and stones

The old-time builders usually took advantage of all waste space around the flue by putting in closets

To secure the proper slope for the sides make the width of the back two-thirds of the front, letting the sides first run straight back for the width of a brick to save beveling them at the front edge. Allow the back to rise perpendicularly for about a foot before it begins to slope forward towards the throat.

A fireplace can be built without the iron damper, but its presence is a guarantee that the form and size of the throat will be right. Then, too, its front ledge supports the flat-arch brick of the front which without it would require an iron angle bar.

See that the opening into the flue proper, which latter is best lined with terra cotta forms made for the purpose, is over the center of the fireplace, in order to ensure equal draught throughout the fire chamber. From this central point the flue may swerve to either side to get around a fireplace above.

Let the brick hearth extend sixteen or eighteen inches beyond the opening—the brickwork pattern is a matter of taste. It is supported on a "trimmer arch" or "rowlock arch," as shown in the diagram, sprung between a pair of floor joists and the chimney foundation. See to it that no wooden timbers run through the brick masonry under the hearth or close to the sides of the fire chamber. The heat will eventually set these on fire.

The white cement facing and simple woodwork make an unusually distinctive fireplace in Mr. Frank Miles Day's own home

The chimney itself should run a foot or so above any nearby roof ridge, and it should work without any cowl, whirligig or other tin toy on the top.

Bricks for lining the fire chamber, hearth and smoke chamber should be hard burned and laid in the best cement mortar. Ordinary lime mortar will not stand the heat of these exposed locations.

Do not make the mistake of having an ash-drop in the hearth, nor take out the ashes at all until the accumulation leaves no space for fresh logs. The presence of a glowing mass of embers under and back of the blaze is one of the wood fire's greatest charms. Bury the unconsumed wood each night under the ashes and it will furnish the best kind of a starter for to light the next evening's fire.

The extended line of mantel shelf against the white wood paneling gives a fine place for the pewter collection

With our scientific fireplace completed there remains the problem of the mantel or plain shelf that is to embellish the chimney breast. There is an infinite variety of possibilities here, from the unadorned breast of brick, stone or cement, to the delicately carved white painted mantel of Colonial times. Usually the treatment is governed by the architectural character and finish of the other woodwork in the room—a rough stone chimney breast is out of place with the delicately molded trim belonging to the Colonial style of interior, nor would the slender columns supporting a classic order and shelf of the latter type harmonize with heavy oak furniture and trim. Select the mantel to fit the character of the interior.

Charming mantels of Colonial pattern are obtainable ready to set up and finished with the first coat of white paint. Or, if your interior is of the so-called craftsman type, make the mantel shelf and its support of waxed oak in plain lines to correspond.

Throughout the discussion of a fireplace's essentials in construction the assumption has been that brick would be used. This is by no means necessary, though it is easier, perhaps, and more appropriate to build a fireplace of this size with that material. For the facing, however, tiles are occasionally used to excellent effect—not the highly glazed, raw-colored tiles that we associate with the gas log and the sham fireplace, but dull, handmade tiles that are not necessarily precisely true to size and square edge, tiles that show forth something of the fire that made them. The square ones, three inches on a side, are obtainable in plain dull squares and variously modeled raised patterns. A border of the latter around a plain field, or a diaper pattern in dull reds or greens makes, either of them, a charming fireplace facing. They are set in cement against the brickwork.

But what of the fireplace that is already built and is never used because of its misbehavior? There is at least a good chance

Keep the ashes on the hearth—an accumulation of them contributes largely toward a better fire

In the Middle Ages they lighted the fire in the middle of the hall and listened to the minstrels in the gallery

A fireplace about 2 ft. 6 in. high by 3 ft. in width will give greater efficiency than a very large one

that it can be remedied. The fireplace expert represents a new profession that thrives on the follies and ignorance of past and present builders. Here, however, is something to try, first. Many fireplaces smoke for the reason that the flue is too small for the opening. You cannot increase the size of the former but you can easily decrease the latter. Take a pair of thin boards, six inches wide and cut to fit snugly into the opening along its top. Wedge one in at the top, light a fire, and draw the other board down over the outside of the first until the opening is reduced sufficiently in area so that its flue can take care of the smoke. Perhaps you will not need even the six inches reduction. When the working combination is found, have a copper or sheet iron curtain made to replace the boards.

Still another common fault is a throat that is too wide. Remedy it by laying across the top of the throat opening an iron plate that can be pulled back and forth, until the throat is the proper size.

Screening, Revealing and Emphasizing Objects or Views

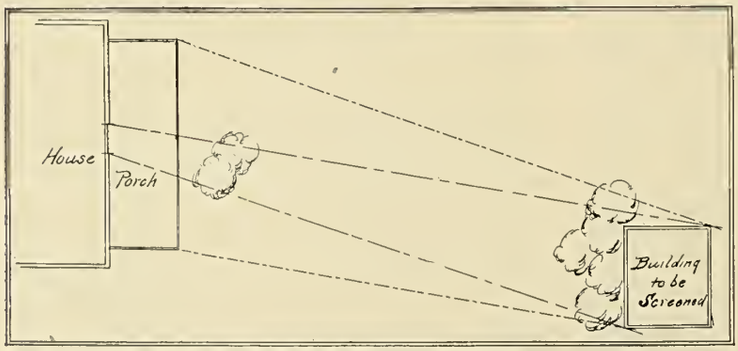
JUDICIOUS PLANTING WILL DO ONE OR THE OTHER OR ALL THREE, MAKING EVERY OUTLOOK A PLEASING ONE WHETHER THE PLACE BE LARGE OR SMALL

BY GRACE TABOR

Photographs by Thomas W. Sears, landscape architect, and others

[*The fourth of a series of articles by Miss Tabor on the subject of landscape gardening as applied to the American home of moderate size, preceding titles being "Utilizing Natural Features," "Getting Into a Place," and "Formal or Informal Gardens."*]

A BARRIER of living verdure makes an unpleasant prospect practically non-existent, whether space be measured in acres or in feet. Therefore it does not seem an exaggeration to say that the possibilities which lie between what is termed "planting out" and "planting in" are the greatest boon of the garden builder, wherever he may be working. Nothing need be endured, for even the tiniest of snug little places has room for a screen of one sort or another, and in all probability needs it.



The relative sizes of object to be screened and view point determine the location and size of the screen

While distance is the primary consideration in planning a screen—not the distance of the object to be screened, however, but the distance between it and the screen—this is determined by the relative size of the object and the place from which it is desired to hide it. So these demand attention first.

Let us suppose that the small building at the right in the diagram is to be cut off from the window of the house only; then, in order to be made up of the least number of shrubs possible, the screening group must be placed close up to the house. But if the same building is to be planted out from the entire porch it will be necessary to set the shrubs of the screen as close up to it as they may go in order to use the least possible number—therefore at the greatest distance from the porch. So we find the rule to be that when the object is larger than the space from which it is to be screened, economy is served by shortening the distance between the screen and the observation point; but when it is smaller than the region from which it is to be excluded, the reverse is true, and fewer shrubs will be required if the distance between screen and observation point is extended to the fullest degree.

The material to be planted cannot be decided upon until the position of the screen is thus determined, as its selection depends greatly, of course, upon the amount of space allowed. Naturally evergreens are the things ideally adapted to screening, for they

fulfil the purpose winter and summer; if they cannot be used entirely it is well to make them form a large portion of every such group.

Lack of space need not exclude them, for a hemlock hedge will take up as little room as anything; it may be brought to any desired height and will stand shearing into any form. And its impenetrable wall of soft, thick, beautiful green is lovely enough to need no excuse for being.

But it is well, usually, when a screen has to be situated near at hand, to present it, itself, as a feature, frankly drawing and centering attention upon it, instead of attempting to make it unobtrusive and unnoticed. Such an attempt is bound to fail when the distance is short; and the irritating suspicion which constantly recurs when the vision is intercepted by a group that, of itself, is not interesting enough to distract attention, is something to be avoided if possible. It is a subterfuge to feature the screen, but a perfectly excusable one.

Countless ways to make such a barrier itself of special interest will suggest themselves, according to a situation. With a hemlock hedge a semi-formal treatment is excellent; a pedestaled faun or a row of them, placed before it at intervals of ten to fifteen feet and gleaming white against the green will never grow wearisome. Or if these seem too ambitious for the rest of the place, substitute a sun-dial, an urn or a garden seat, with a flanking pair of small pyramidal boxwood or juniper trees, or a pair of flowering shrubs. Ramblers or pillar roses, gathered up and tied to a straight young sapling, take up very little room and grown this way are marvelously effective, lending themselves especially to cramped quarters. Simpler than anything else would be a row of these to form columns of bloom against the hemlock's dark green.

Privet grows much faster than hemlock and costs a great deal less—and it holds its bronzy leaves persistently even against wind and snow and frost. So, for prompt results, and cheaper, it is very satisfactory indeed; even without a leaf upon its branches an old privet hedge that has been properly trimmed is so twiggy that it very effectually hides the thing beyond it.

Where there is room enough a thick planting of arbor vitæ, hemlock, spruce or cedar, left untrimmed to form a natural background for a border of flowering shrubs, cannot be improved upon. Low-growing evergreens may be used in place of the shrubs if one has a fancy for them rather than the latter's summer bloom.

These conifers do double duty, protecting the garden and hiding dairy sheds only a hundred feet away

For screens to be placed at a distance, on a place of considerable size, I should always recommend conifers as the dominant note, with deciduous trees beyond in as natural and forest-like relation as possible; a facing down of mountain maple (*Acer spicatum*), the dwarf and very beautiful mountain pine (*Pinus montana*, variety *Mughus*), or the low-growing junipers (*Juniperus communis*, varieties *Canadensis*, *vulgaris*, *nana* or *pendula*), will help in duplicating the appearance of a natural thicket.

Whatever the thing may be that mars the outlook from within a dwelling or offends the eye at any point of the surrounding grounds, I should like to urge that something be done to annihilate it, promptly. There is no excuse for contemplating a neighbor's chicken yard from the library windows, nor for tolerating a view of his tool house or wood pile from the front gate, for a little contriving will find a way to hide them. Similarly, even remote objects may be blotted from the landscape; if not in one way then in another—for what a bush will not hide a pine tree will.

The process whereby the outer world is included in one's private grounds or garden—the "planting in" process—is obviously not altogether that, literally. Rather is it a great deal more than that, for the term applies of course to any arrangement

Quick-growing poplars against a wall make an adequate screen

The white marbles break the monotony of and lend interest to the dense evergreen hedge, which hides a roadway winter and summer

One trick of successful screening is to make the screen and its foreground so interesting that one does not wonder what lies beyond

which brings an object or a view—usually the latter—into the general scheme of a place, even though it is miles distant from it.

Leaving the intervening space unobstructed and quite free from any planting would seem to be the simplest way of accomplishing this, but curiously enough it fails utterly. For a view must be more than *there* to give us the full benefit of its beauty; it must be *there-for-our-benefit* and something must be done to make us feel this, to assure us unmistakably that this is so, as we look out upon it. It must be incorporated into the place from which we behold it.

The one thing which accomplishes this very much to be desired result—the thing that is the key to success in this phase of tree and shrub planting—is the thing that is generally overlooked and unsuspected. Yet it is so important that it cannot be over-estimated nor over-emphasized. Briefly it is this: the dominant line in a view must dominate the planting which carries the eye to that view. In other words, the lines along which the planting carries the vision must be made harmonious with the object which ultimately meets that vision—must be what someone has very aptly termed "eye sweet."

At first glance this may seem impossible, in some instances anyway. For example, how is the vision to be carried *straight ahead* by means of lines that conform to a sea horizon? Certainly

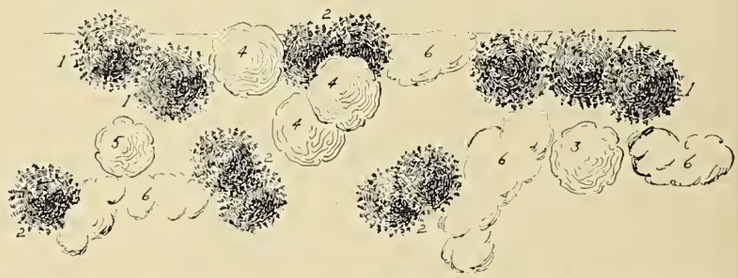
Here is a masterful harmony between terrace wall, river and sky line, the whole embodying the perfection of dignity and repose

the dominating line of that is horizontal; and a horizontal line is at a direct right angle with the line of vision as one looks out to sea.

True enough, nevertheless the vision travels straight to the seascape over broad lines of planting which sweep to left or right, or both, in lines that are generally horizontal, much more swiftly and directly than it does where an effort is made to actually carry it forward with lines of planting that run *against* the horizon. The rule holds because, as a matter of fact, the planting cannot force the vision through tunnels or along ruts or ridges of green; it can only persuade it and lead it on. It is a matter of suggestion, not coercion. And successful suggestion always presents but the one idea—it offers not the subtlest hint of a resistant force or, in this instance, direction. The idea in the case just cited is all breadth and expansion, and nothing should occur to distract the mind, through the eye, from this.

A view that follows a valley requires "planting in" on precisely the same principle—that is on the lines of the valley whether they be oblique to the view point, or horizontal, or straight away; similarly a view of field or mountain or stream must determine, by the line which dominates it, just how the vision shall be helped along the way.

I have yet to find an instance where the rule does not apply—and it not only *includes* the prospect within your own domain legitimately, but it emphasizes its presence there, and by this emphasis enhances its value to the whole. Consciously or uncon-



A planting plan for a screen group 200 feet long. 1, Austrian pines; 2, Hemlocks; 3, White Birch; 4, Lombardy Poplars; 5, Mountain Ash; 6, Shrub groups

sciously the artist makes use of it in a landscape, and views that give a sense of complete satisfaction will be found to measure up to the standard which it furnishes.

Happily circumstances require the planting of barren tracts to create vistas rather more often than they do the cutting out of Nature's growth to clear them—happily at least for some of us. I doubt if many who love outdoors and all that lives outdoors, can see a tree felled without a shivering pang of regret. I am perfectly free to confess that I cannot—yet it is quite as important to eliminate vegetation under some conditions as it is to preserve it under others. But let there be no uncertainty about when to do which—for the hour in which a tree may be laid low is tragically brief compared to the half a hundred years or so it may have been growing.

When circumstances force a choice between trees and a view, and it is the *only* view, choose it every time—unless there is chance for an interloper to come between and steal it from you at some future day. Settle this beyond a doubt; never open a vista that may end in an eye-sore some day, through a neighbor's freak or folly or indifference.

But do make as much of the world your own as you can, right down to the rim. There is soul expansion in living with a horizon, either of land or sea, and trees that hide it are cheating you of something you cannot afford to be without—something rightfully yours. Condemn them and take them out without compunction—their room is better than their company—though it may hurt to see them go.

A side entrance on a plastered stone house. Cope & Stewardson, architects

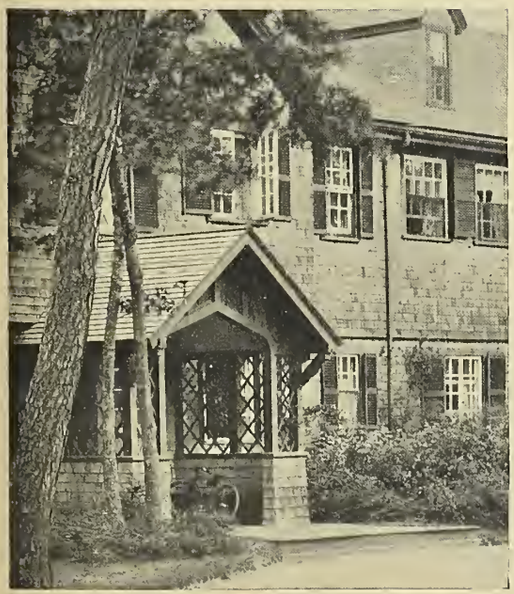
The " Dog trot " entrance to a house and enclosed garden in a Wisconsin home. Howard Shaw, architect

An old-time Salem " stoop" with its blinds and brass knocker

The wrought iron fence treatment marks this old Charleston entrance

The front entrance of a thatched cottage in Sussex, England

The curved hood roof is unusually effective here. Guy Lowell, architect



The latticed porch and built-in seats lend an air of informal hospitality

The stately classic entrance of a Southern Colonial stone mansion

A small porch usually marks the country house entrance. Dwight & Chandler, architects

NINE TYPES OF ENTRANCE DOORWAYS

The stable group of to-day should echo the architectural character of the house. Alfred Hopkins, architect

Harmonizing the Outbuildings

SUGGESTIONS FOR BRINGING THE WHOLE HOMESTEAD GROUP INTO HARMONY, WHETHER IT CONSIST OF NUMEROUS UNITS OR MERELY OF A HOUSE AND A GARAGE

BY WILLIAM ALLEN

THE initial impression received by a traveler making his first tour in foreign lands is a sense of the architectural harmony to be found in the relation, one to another, of the different buildings of every group he comes across, in town or in country, on mountainside or on plain. It is this harmonious relationship of building to building, especially of the lesser buildings dependent upon the main edifice, that forms the very backbone of structural picturesqueness, and makes us forget the squalor of the peasant's surroundings in the artistic impression made by an arrangement of thatched cottages and outbuildings.

Our Colonial ancestors brought to America a very strong sense of the value of harmonizing the outbuildings to their surroundings, making both the house and the garden units of a complete scheme. Mt. Vernon is a notable example of this, and, so long as some style-purity survived, there were many other examples of early American architecture to illustrate the point.

Even in some of the shingle-side cottages that have survived the vicissitudes of a century or two are to be found indications of just how strongly early American home-builders sought for picturesque effects, and their strong sense of consistency in the grouping of buildings of any sort.

In the dark ages of the Fifties, and the Eighty-eights, public taste in architecture had called forth the never-to-be-forgotten reproach of Queen Anne fronts and Mary Ann backs. These were eras where every known architectural style joined protestingly in a mad architectural melée all in one house, which was apt to have a Gothic balcony, a Colonial porch, a châlet porte-cochère, a Pompeian terrace, Louis XVI windows, Tudor turrets,

Garages are springing up like mushrooms—why not build them to harmonize with the house

and Italian chimneys, all at one and the same time, with a jumble of as many odds and ends for the outbuildings. Indeed the stables, the storehouses, the tool-houses and garden houses, the fuel houses and all outbuildings seemed to vie one with another for fantastic supremacy.

Mt. Vernon is a striking example of the harmonious grouping of all outbuildings

Fortunately such things do not last long, and one remembers, with a smile, the remark of a worthy Quaker, who, amazed at the bad taste shown by his neighbor in the sort of a house he chose to build, remarked "John, if architecture be frozen music then thy house is truly a frost!" Everyone who plans to build now stops to take into consideration every fence, post, curb, shed, stable, and outbuilding, and its final relation to the whole scheme of house and grounds.

In harmonizing the outbuildings there are three things to consider, so

far as mere appearances are concerned. These are form, style and color. Your house should serve as a key to all the problems you may find connected with these matters, at least if you are about to build. If, on the other hand, you are living in a house that has been built some years and believe you can make it more attractive by harmonious surroundings, it sometimes happens that you must reverse the order of things, and make your house harmonize with its outbuildings.

One of America's most notable country home groups—the Breese place, Southampton, L. I. Designed by Stanford White

Sometimes this can be done through a color harmony being brought about by repainting, by the addition or subtraction of ornamental architectural detail, or by remodeling. Finally a sense of proportion, often utterly lacking in a group of small scattered outbuildings, may be restored to them by the happy introduction of such connecting links as properly planned fences, walls, roofed walks, pergolas, etc., which give form to such a group and dignity to its new conception.

By architectural harmony one must not suppose mimicry is meant. The writer has seen stables that were simply either smaller or larger editions of the house, with monotonous annexes that were miniature editions of themselves. In a certain Massachusetts village there is a house which some sea captain, more versed in sailing than in styles, built some years ago as a monument to his happy fortunes. It boasts a cupola, which is a faithful model of the house itself, a bird house which is a faithful model of both, and a barn below it that is twin to the house. On each side of the driveway approaching the house are two fieldstone posts, each capped by a tiny model of the captain's house, and a fountain

A New Haven house and its garage as designed by Hoggson Brothers

on the same order ingeniously spurts water out through the windows and up through the chimneys of its tin premises as a family diversion during rainy days—in drought water cannot be coaxed into the community for any purpose, let alone fountain spurting.

The captain is very proud of it all, and he believes, without doubt, that a wonderfully harmonious arrangement has been effected in this manner. One hardly has the heart to disabuse his mind, but his example may well serve as a warning of what *not* to do.

However, instances of this sort are becoming less and less common, for architects throughout the country have been giving much attention to the matter. Perhaps no architectural factor has had a greater hand in determining the modern trend of ideas in this connection than the widespread introduction of the use of concrete as a building material. Many a large American estate has come to be as picturesque as an European village through judicious planning of the outbuildings, and so, too, have much less pretentious places likewise found their attractiveness enhanced by the care and thought that have been given to such matters.

In beginning to plan for the home one should ask himself what buildings beside the dwelling will be necessary to keeping it up. He should not wait until the house is built before he begins to think about the outbuildings. Quite possibly the house could accommodate itself to accessory buildings very nicely if these entered into initial plans, whereas many a house-builder lives to regret his thoughtlessness in not planning for future outbuildings and finds, all too late, that he has not provided for their proper location as he might have done in the first place by accommodating the dwelling under possible conditions to a relationship with them when they should come to be built.

Again, outbuildings may be arranged with some idea of serving as wind-breaks, or to furnish shade where required for certain convenient kitchen and stable yard operations.

When fences and walls are needed for the protection of buildings and yards, one cannot be too careful about selecting plans for them. Nothing is more unsightly than walls or fences between outbuildings that carry in their design no sense of relationship to anything else about. It is not enough that your stable wall, for instance, should hide the stable yard, but it should enter into the decorative scheme of the whole group of outbuildings, and this cannot be accomplished if one gives the matter no particular thought.

Taking the whole matter into consideration, one cannot do better than to explore his premises and ask himself if there is not something he can do to enhance their beauty of livableness, or practicability by better attending to the problem of harmonizing the outbuildings.

A stable and poultry house of concrete, harmonizing with the Pabst house, Oconomowoc, Wisconsin

Stone walls give an appearance of enduring solidity that other materials only approximate

A combination of gray shingles with local stone laid in white mortar makes a cheap and effective house

Of What Shall We Build Our Walls?

SHALL WE USE SHINGLES, CLAPBOARDS, STUCCO, BRICK, CEMENT, STONE OR SOME COMBINATION OF THESE—AND WHAT WOULD EACH COST?

BY RUSSELL FISHER

Photographs by Thomas W. Sears and others

NOT very many years ago, before the present epoch of easy transportation and aggressive invention, the problem of selecting a material for the walls of the house bothered home-builders of that day little or not at all. A man employed the one or two materials that were nearest to hand. In the stone districts he found all his neighbors' homes built of the local building material; the builders knew how to handle it better than any other, even if it were available, so the natural thing to do was to follow his neighbors' examples. In other localities stone was a scarce material and wood prevailed; in clay districts brick kilns formed the source of material for the walls. Not long ago I was driving along a road in central Vermont when, to my astonishment, I noticed that the foundations and underpinnings of houses, barns, outbuildings, and even the roadside walls, were built of *white marble*, almost as flawless as the statuary marble of Italy. It was the material nearest at hand, to be had from the outcroppings merely for the gathering, so it had been used.

Among the old cottages of England this employment of local building materials is one of the most striking and attractive features of that most picturesque architecture. In one county the cottages are all of plaster, roofed with thatch; again, they are of half-timber construction; in another district—the Cotswold, for example—stone is used, with heavy slates on the roof. Here in America, too, we have progressed far enough to be able to look back upon that period when local materials gave a distinctive character to every village and country district. Consider the wooden homesteads of New England; the stone, plaster and wood in combination that marked the homes of the Dutch settlers in northern New Jersey, New York and Pennsylvania; the stately Georgian mansions of brick in Virginia.

Even to-day there remains here and there a wholesome and affectionate regard for the local building traditions. In the vicinity of Germantown, for instance, where the local gray, mica-specked stone has remained for years the favorite building material, the houses have an air of neighborliness and harmony that sets the whole community upon a higher plane.

There is no doubt, whatever, that one of the chief causes of the heterogeneous inharmonious character of the bulk of our modern American homes is the recently widened choice of building materials now open to us. Transportation and modern invention have brought too generous a contribution to our doors. We are handicapped by an embarrassment of riches.

In the first place we have wood—shingles, clapboards or siding. It has long held an enviable position among the building materials by reason of its low cost and the facility with which it may be erected. The former quality—low cost—is probably soon to be won by stucco or by concrete. Lumber has more than doubled in price during the last decade or so, and so long as we continue to burn up untold millions of it year after year, with little or no provision for renewing the supply, the price seems likely to rise even more speedily in the future. Then, too, in building a house we must keep in mind the fact that first cost is not the whole matter. Wooden houses require paint and frequent repairs, to say nothing of insurance. It is a question even now, taking into account initial cost, maintenance, and depreciation, whether in many localities the advantages of cost are not on the side of stucco on concrete

COMPARATIVE COSTS OF HOUSE WALLS PER SQUARE FOOT NEAR NEW YORK

Local stone, furred, lathed and plastered	$0.41
Brick, furred, lathed and plastered	.56
Brick, furred, lathed, plastered and rough-cast	.65
Concrete, furred, lathed, plastered and rough-cast	.58
Terra cotta blocks, plastered and rough-cast	.37
Terra cotta blocks, furred, lathed, plastered and rough-cast	.38
Stud wall, lathed, plastered, sheathed and shingled	.27
Stud wall, lathed, plastered, sheathed and rough-cast	.32
Stud-wall, lathed, plastered, sheathed and clapboarded	.26
Stud wall, lathed, plastered, sheathed and false half-timbered	.37
Half-timber wall, brick-filled, lathed, plastered and rough-cast	.45

Clapboards in most localities make the cheapest wall in a first cost, but the repainting brings up the total

Plastered walls are warm and need no paint, and the surface may be given a variety of color and texture

or on hollow terra cotta tile. There seems little doubt that the latter materials are soon destined to become the least costly of all, excepting, of course, in places where some local material holds an undisputed field.

Stucco is a wonderfully adaptable covering for the walls, and one that has leaped into popular favor here in America almost at a single bound. Plaster, rough-cast, pebble-dash, and cement are other names given to this coating of cement plaster applied to wood or metal lath on a stud frame, applied to terra cotta blocks, to monolithic concrete walls, to common brick walls and occasionally to stonework.

Brick has the advantage of being readily obtainable in most communities; workmen can always be found who know how to lay it up, and it makes an attractive and durable wall. Of late years architects and manufacturers have developed the artistic possibilities of the brick wall to an amazing extent. Variations in the size of the brick, their texture and color, the bonding and the character and color of the mortar joints—all these elements may be so disposed and studied as to give every brick house a distinctive character of its own. Brick walls never need paint; if shabby they may be washed down with a brush and a weak solution of muriatic acid.

Finally, there is stone, the oldest material of them all, unless wood huts came before stone caves. Stone houses have an air of solidity and permanence that other materials cannot give. And there is no lack of possible variety, both of texture and color, in a stone wall. You can use large irregular stones with wide joints or you can use smoothly cut stones with almost no joint at all, though the latter style is far better adapted to the city than to the informal countryside. Stone is usually of a pleasing enough color and texture to stand on its own merits. Where it is not, a thin, almost transparent coat of white cement plaster will redeem it and not rob the material of its appearance of enduring solidity. Walls of cobblestones are seen in increasing numbers, particularly as the underpinning of shingled houses. The material is not well suited to such uses, and always bears a look of instability—as if the round stones would easily roll apart. Where cobblestones are too cheap to be overlooked they may be cracked and laid up in pieces to much better effect.

First cost is but one of the considerations that enter into a choice among the available building materials for the outside walls. Consider also the cost of maintenance and wear and tear. Will the added cost of building a fireproof house be paid by reduced insurance premiums? We cannot—or at least should not—select a material that will be out of harmony with the homes of our neighbors. Availability of materials will necessarily be a factor in determining the choice, and, judging from the past, it will lead in the right direction. The style of architecture may settle the matter for us, provided we are not willing to let the material govern the style—we would not build a New England farmhouse type of stucco, nor an Italian villa of shingles.

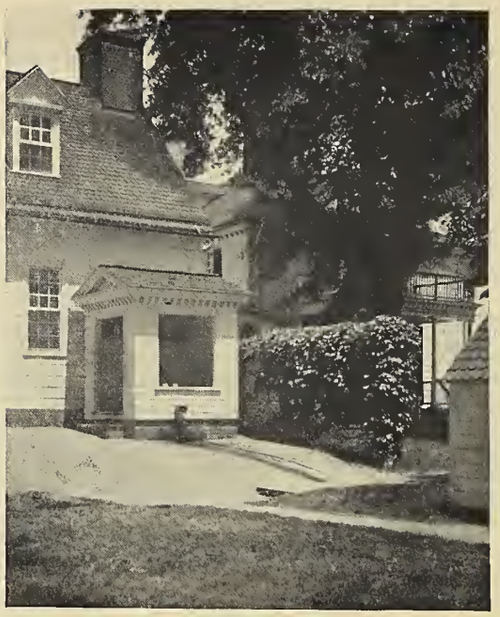
Whatever material is chosen, however, make up your mind that in your own house it will have a treatment that is consistent, harmonious and having a distinctive character of its own.

Shingles for walls have a reasonably long life, particularly if dipped in a creosote shingle stain before being put on

Brick is obtainable in most localities and the walls may be given variety through the bonding and color of mortar

See to it that the well stands on high ground and is deep

Picturesque, but the wind usually fails in dry seasons



Sink new wells only where contamination is impossible

The Water Supply for the Country Home

VARIOUS METHODS BY WHICH ONE MAY HAVE PURE WATER IN ABUNDANCE FOR THE KITCHEN, THE BATH, THE GARDEN, THE LAWN AND THE LIVESTOCK

BY HAROLD WHITING SLAUSON

Photographs by Thomas D. Sears, J. T. Beals and others

THERE is nothing which more facilitates comfortable living than an abundance of clean, fresh running water always at hand and supplied directly throughout the house by means of well arranged systems. Not only is it needed inside the house, either, for unless you have a plentiful supply of water, especially during dry seasons, you cannot hope to keep your lawn looking well. Often too little water on the lawn during droughts is positively more harmful than none, because it causes the growth of the roots *towards* the surface, and consequently the grass plants are weakened. Therefore in dry seasons the lawn must be thoroughly wetted, so that a sufficient quantity of water will reach the lowest roots of the sod. Thus, it will be seen that in planning the water supply for the house that is to have a lawn, this important requirement must not be overlooked.

The water supply for the stable should be as pure as that for the house. Do not for a moment suppose that animals can thrive on dirty water.

One should always be suspicious of old wells that he knows nothing about, but it is just as important that the new ones should not be sunk in positions that subject them to the least possibility of contamination. If one has the least doubt as to the absolute purity of the water supply he should send samples of it to the agricultural experiment station of his state, to state boards of health, or to anyone authorized to analyze waters. Well aerated basins of sand- and brick-filtered rain-water hold the safest water supplies. While great depth in the well generally insures against objectionable matter of an organic nature it may lead to the introduction of mineral elements that make the water hard or even unhealthful. Shallow well-water is almost never safe from a well of only fifteen to twenty-five feet in depth, for surface water invariably flows instead of filters into it, after a drought has dried and cracked the soil. So the well should be placed on high ground when possible, and one should remember that man's dependence on a pure drinking-water supply makes any avoidable economy connected with obtaining it an absolute folly.

Happy is the possessor of an artesian well. He who drills through solid rock from high ground to the base of the water supply will find, in the long run, that his drilled or artesian well is one of the least expensive methods of obtaining water when one takes into account a perpetually adequate supply.

Although springs, wells and streams of clear, pure water abound in the country, many of the houses there are without equipment for any running water supply; consequently they are without one of the chief conveniences which add so much to the advantages of living in town, where water-taps in several rooms and a bath on every floor have come to be considered as necessities of modern living.

Of course, windmills have been used for centuries, their principal work having been to pump from wells for the purpose of supplying water for cattle. However, in late years their field of utility has been enlarged, and the windmill is now often erected for the purpose of pumping a supply of fresh running water into the house-tank for family use. Nevertheless, owing to its dependence on a brisk wind for performing its duty, and to the fact that in summer, which is not the season of frequent winds, the greatest amount of water is needed, and as the capacity for pumping by this method is at times limited and uncertain, entire dependence upon a windmill for household water supply on a large estate is apt to be somewhat precarious, although it may do very well for the smaller place.

When, at all seasons of the year, a stream of running water is available near the house, an hydraulic ram is an economical means of obtaining a private water supply. The ram is entirely automatic in action, and requires no fuel or outside source of

power, inasmuch as the energy necessary for its operation is obtained from the water of the stream on which the apparatus is situated. By this means a comparatively large amount of water falling a short distance is made to force a much smaller stream to a far greater height, and is a convenient method of utilizing water which otherwise would be wasted. The ram practically requires no attention, and may be kept out-of-doors in all kinds of weather in the summer months, but is ordinarily unavailable for use in the winter owing to the probability of freezing.

Probably the simplest and most economical source of power for pumping purposes the year round is the hot-air engine, which can be adapted for any kind of fuel from wood and inflammable refuse to gasoline and alcohol. The working principle of this engine, briefly stated, is that air, when heated, will increase in volume and in so doing is made to force up the piston which operates a flywheel to which the pump is connected. Such an engine is generally installed either in the barn, the cellar, or in some small outbuilding near the source of supply, and pumps the water into a tank located in the top of the building or elevated on a framework nearby. An engine of this sort can run all day with no other attention than the supplying of fuel at proper intervals, practically lasting a lifetime, and requiring but a small expenditure for repairs. One design of hot-air engine is made especially for pumping from artesian wells where the height from the source of supply to the ground exceeds twenty feet—a distance above which it is difficult to obtain a satisfactory vacuum sufficient for raising the water. In one model the pump itself is placed on a long rod, and can be operated much nearer the surface of the water than the location of the engine would ordinarily permit. In consequence of this, various styles of this engine are adapted to almost any kind of pumping that might be required in city or country.

There are few successfully designed water towers, one of which is this example near Philadelphia—Price & McLanahan, architects

Another convenient water pump is of the centrifugal form, which can be operated at a comparatively high efficiency when connected directly to a small electric motor. In case no electric current is available the pump may be belted to a gasoline or kerosene engine, and although a certain amount of power will be lost by this system of transmission, the decreased efficiency is probably overbalanced by the increased economy obtained by the use of these fuels, unless a private electric lighting-plant is installed.

The amount of power required for supplying an ordinary house with water is so small that many persons who have given the matter but little thought are greatly surprised when they come to study it. One horsepower expended for one hour will easily raise 100 gallons of water to a height of 100 feet, and as half of that distance furnishes enough pressure for the ordinary country house, 200 gallons would be available at the end of an hour's pumping. This is a sufficient amount for the daily domestic use of an ordinary household, and in this manner an ample water supply could be obtained for a small family at a cost not exceeding three or four cents a day for fuel and oil, plus the proportionate cost of installation, attention, housing and wear and tear. The height to which the water would be raised is taken as the distance from the surface of the main supply to the top of the tank.

Building a windmill as part of the house is not common but it is well worked out here

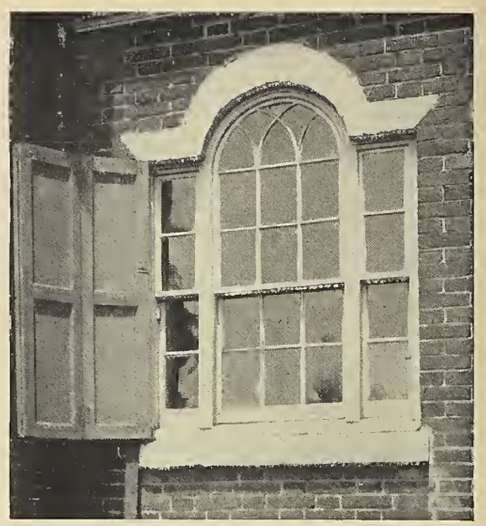
Another private supply system which is becoming very popular obtains its pressure without the use of an elevated tank. In this system the tank, pump and engine may be situated in some out-of-the-way place—under the cellar stair, in the barn, or in fact in any convenient location where there is no danger of freezing. The pressure is obtained by forcing the water to be used into a heavy steel tank, having no air outlet. As the water is pumped into this tank the air is compressed in proportion to the increase in the volume of water. The service water outlet is at the bottom and the tank is so designed that the pressure is sufficient to raise the required amount of water to the desired height as needed.

This supply system entirely does away with the danger of a collapsing tank, and furthermore has the advantage of furnishing abundant pressure to the upper floors of the building, which would be located ordinarily, at such a short distance below the elevated style of tank as to make a sufficient flow of water impossible without the use of excessively large pipes.

A plentiful supply of water will make possible many desirable garden features

Venetian blinds are being more frequently used in place of shutters

Casements really can be made tight against rain and wind



A curious old Georgian window in "Homewood" (1803), near Baltimore

What Kind of Windows?

SETTLING THE MATTER NOT ONLY ON THE BASIS OF PRACTICAL CONSIDERATIONS AND COMFORT BUT WITH SOME THOUGHT FOR BEAUTY BOTH FROM WITHIN AND WITHOUT

BY CARLETON MONROE WINSLOW

Photographs by Julian Buckly, Henry Troth and others

THE problem of proper windows for the house is certainly a practical one, but as the practicability of any household problem involves quite as much a satisfactory solution of harmonious appearance and the possibility of good decorative adorning as it does its utility, we must weigh these different elements and harmonize them all.

Windows are the natural openings into a house for letting in light and ventilation; besides this they are placed to get the advantage of views and vistas from inside the house. Sometimes they combine these purposes with that of egress and ingress from rooms to verandas and terraces.

The first consideration, that of position and size, seems to be a practical one. Housekeepers often say, "You cannot get too much light into a room." Such a housekeeper is, of course, a sunlight enthusiast and speaks strongly, but it is better to have too much than too little light, providing the area of fenestration does not ruin the architectural character of the house. The fault with most of our American houses to-day is that the windows are too large in proportion to the size of house. If the size of the windows could be reduced and their number increased, the path of the conscientious house designer would be made much easier. Generally the house can be designed so that the windows can be grouped and separated only by mullions. Outside blinds interfere with this grouping, but the use of exterior blinds seems to be waning. Awnings or Venetian blinds may be used in the summer time to temper the brilliant sunshine and yet allow adequate ventilation. In the winter one wants all the sunshine he can get.

Shutters should always be provided for such houses as have to be closed for any length of time during the year. These shutters should be made with solid wood panels and fastened from within. If the house is to be occupied during the winter and storm-windows are needed—and they generally are needed upon the more exposed sides of our houses in the northern states, rebates for the shutters should be made sufficiently deep to accommodate the storm-windows in place of the shutters, and a metal ventilator or sliding panel provided for at least one of the panes of glass.

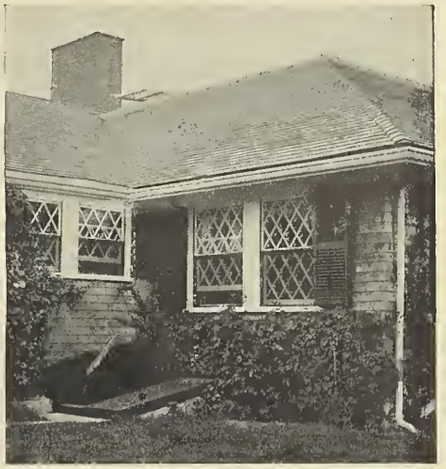
Now comes the much discussed question of whether the windows should be in large single sheets of glass or divided into smaller ones by the use of wood, lead or other metal muntins. It is quite true that in the early days of window glass manufacture, the sash had to be divided into small panes in order to glaze it at all. Glass was expensive and the muntins and bars were frequently scribed and gouged away to accommodate the irregularities of the glass. The mere fact that we can if we wish get a sheet of glass 10 x 20 ft. in size does not warrant the inartistic practice of designing large windows glazed with single sheets of staring glass. These large sheets tend to reduce the apparent size of a house from the outside and destroy the "scale," that fugitive quality all good designers strive so earnestly to achieve.

Then there is the appearance inside the house to consider. It is well known that windows divided into smaller panes of glass tend to increase the apparent size of a room. They certainly add to the home character of a house—why, it is difficult to explain, possibly because of association of ideas and traditional custom. Notice the beautiful home character of the casemented and muntined windows in one of the accompanying photographs—what windows could be imagined having more charm! Does the conventional usage obtaining in Wall Street office buildings give more? Furthermore the appearance inside the rooms is just as charming.

The practical housekeeper is apt to say, "But these windows are more difficult to wash and keep clean. The servants will not stay with us if they have to wash all these little panes of glass." Is that quite true? The writer has never heard any particular case of such domestic difficulty; in fact, has never heard the objection made by any housekeeper who has had experience with them. After all, would it not be worth the trouble? We have many things about the house which are quite unnecessary to our comfort, but we dust them and we wash them without complaint, and would not think of doing without them, and these are sometimes things which do not add in the least to the artistic appearance of the home. Throw out the unnecessary bric-a-brac and

The circular window ventilates a closet, the "eyebrow" window above lights the attic

Leaded glass becomes wearisome unless the design is very simple and rectangular



Diamond-paned windows are not pleasing to look through from inside the house

spend the time used in their care on the windows, if they need it. Moreover, if the panes of glass are set in lead or metal muntins, the whole sash can be washed with the same ease as if it were all in one sheet.

Then there is the question of expense. The first cost is about the same, but windows are liable to breakage and the upkeep of the muntined window is naturally lower than that of the sash with the single pane. Another minor point is that it is easier for the glazier to set a new pane of glass in wood muntins than in metal.

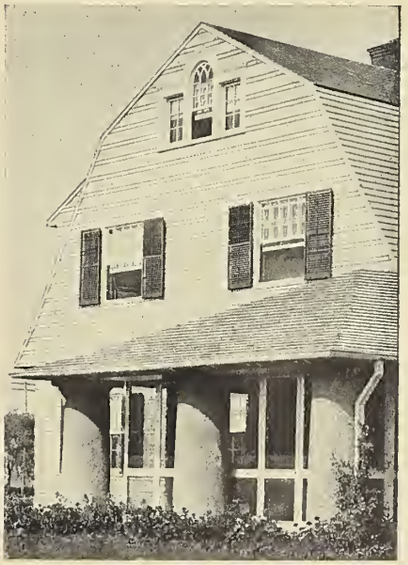
The question of muntined windows suggests that much mooted one of casement sash. When windows are designed for muntins or leaded glass, care should be taken that the style of design conforms to that of the house and rooms. One never tires of the windows divided into oblong panes by simple horizontal and vertical lines. The honey-comb appearance of the leaded glass window in the photograph shows the character of the thing to be carefully avoided. The saw-tooth lines are restless and fussy in the extreme. Diagonal lines cutting the sash into diamond-shaped panes give hardly better results, nor do interlaced curves—besides the resulting frames are unpleasant to look through. Care should be taken that leaded glass windows are tasteful and appropriate, both as to design and location. When properly used they add much to the charm and individuality of a house. Simple, geometric designs seem best—frequently medallions of glass in bright soft colors set in the middle of a leaded sash of clear glass give fine results. Such medallions can be designed to order, while the ones imported from Germany and France show a wide range of subjects and are often charming.

The most earnest enthusiast of the picturesque has to admit the practical advantages of the double-hung sash windows, with blinds or shutters on the outside, shades, curtains or portières on the inside of the windows, which can be adjusted with the minimum of interference with any of them. On the other hand, the person who seeks the more beautiful arrangement of having casement sash swinging either inward or outward readily finds some advantages practical as well as all of artistic. Why do we need shades upon rollers if the sashes swing inward? Is there not some other method of concealing our private life from the gaze of the passerby? The writer remembers a particularly delightful sitting-room in a little hotel in England, with the metal casements swinging inward, where straight, simple curtains of deep brown rep hung from a brass rod which ran across just above and to clear the top of the casements when they were swung in. The ordinary arrangement of cords adjusted the curtains, and when the windows were desired open and the curtains drawn, they were easily tossed over the top of the casements and drawn together. These casements were of wood with metal leads and had extra curtains of white, tiny-figured suisse hung from the top rail of the sash.

(*Continued on page* xi)

One tires of nearly all sash divisions that are not simply rectangular

Metal casements with lead divisions or "muntins", long used in England, are now available here



The gable window of this Garden City house is a Palladian adaptation

Where the architectural detail is of Georgian or some other distinct style it should set the key for the furnishing and decoration

Where the wood trim is of unmolded and stained wood the walls are best kept plain and the color introduced in the hangings

Individual Rooms *vs.* a Comprehensive Decorative Scheme

SHALL WE HAVE A COLONIAL LIVING-ROOM, MISSION DINING-ROOM AND BLUE GUEST CHAMBER, OR SHALL INDIVIDUALITY BE MERGED IN A CONSISTENT SCHEME FOR THE WHOLE INTERIOR?

BY MARGARET GREENLEAF

Photographs by Waldon Fawcett, J. T. Beals and others

THE relative treatment of adjoining rooms is a consideration which contributes largely to the success of the interior decorating and fitting of the house, particularly where the rooms of the first floor open together. For such rooms a complete and comprehensive scheme must be planned which will include them all in a way and yet permit certain essential characteristics to be brought out in each.

In determining the color scheme and decorative treatment the arrangement of the floor plan, the dimensions of the rooms, the placing of doors, windows and fireplaces, and the characteristics expressed in the architectural detail must all have equal weight.

We quote here from a letter received from a woman in a Western town, who, after her house was completed, felt there was something wrong in this newly furnished and expensive home. She wrote as follows and her letter voiced the disappointments of many other women who have had similar ambitions: "I have spent a great deal on my house and I left it in the hands of a decorator from the largest department store in ———. My reception room is furnished correctly after the Louis XVI period. My hall is Colonial, my dining-room old English. The den and smoking room is *l'Art Nouveau* and," she plaintively adds, "with all of this it is not satisfactory." Such a description brings at once to the mind's eye an effect that is cluttered and distracting and wholly inconsistent and unlivable.

In giving this matter of interior decoration and house furnishing careful study, one realizes that the crux of the whole matter lies in selecting color schemes, materials and furniture which are consistent and suitable. To be consistent the scheme must be within the means and fit the requirements of the occupants, and to be beautiful the rooms must be relatively harmonious and wholly suited to the general environment, both of exterior and interior.

In a hall which serves as the entrance to a house of Colonial design it is particularly desirable that the rooms on the left, the right, and the rear should be in harmony with its Colonial feeling. If one yearns for a French drawing-room in such a house, furnishings of the contemporary period of the French Empire may be appropriately introduced in this the most formal room of the house. The wood finish in the hall could appropriately be ivory white enamel with doors and hand-rail perhaps in softly polished mahogany. The standing woodwork of the French drawing-room should be treated with the same enamel. For the living-room on the opposite side of the hall a less formal treatment and Colonial furnishing could be indulged. The dining-room at the rear of the hall may hold either mahogany or oak wainscot or could be finished with white enamel. The dominant color appearing on the walls of the hall should show again in the living-room, and if the French drawing-room had walls of old rose or Empire green as its prevailing tone a suggestion of this color should be carried into the other rooms.

In the vernacular house which is frequently built of cement, or shingles and siding, with casement windows and sunken doors suggestive of the English cottage, the interior trim should most appropriately be of wood stained to what is known as a natural tone, that is, showing such color as this particular wood might take from age, and long exposure to weather conditions. For instance, if chestnut is used for the standing woodwork throughout, this may be stained in shades of gray-brown gradually toning to silver-gray in the least lighted rooms of the house. The gradation of color in the woodwork from room to room is so slight as to be more felt than seen. The wall tones should be equally

Especially where rooms are not sharply divided is there a necessity for carrying the main decorative scheme through both

Furniture built along Colonial lines looks its best only in an environment of white enameled woodwork

harmonious and show slight contrast. The ceiling tint between the beams, or where a plain ceiling is introduced, should show the same in all rooms, and all floors stained alike in shade and given a similar finish. The variety brought into these rooms may be introduced through the medium of draperies, furniture covering and rugs, and these also should show color relation. If in the living-room the furniture is covered with a mingled effect in cotton tapestry, the chairs in the adjoining hall should show seats and backs in plain color. In the dining-room the same suggestion should appear in the furniture as far as construction and form permit. Door curtains of plain colored velveteen or arras cloth, with raw silk, scrim, or crash used at the windows, would carry the decorative feeling as expressed in the architectural detail.

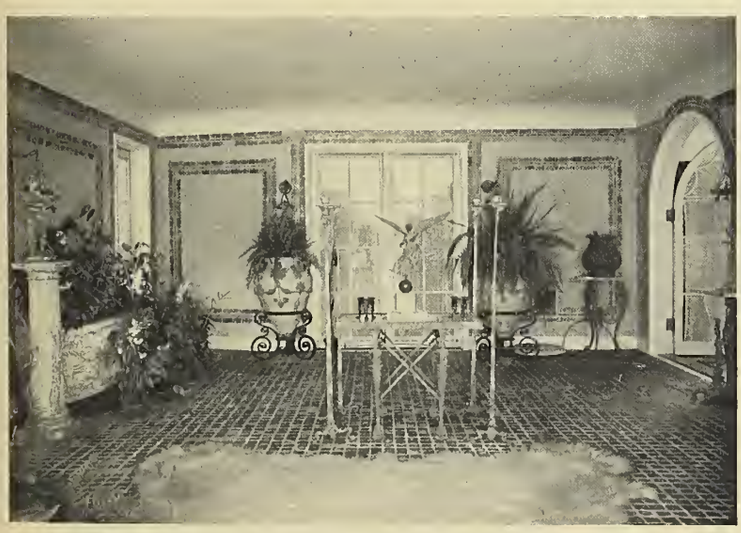
It is not often possible for the average person who builds a house to furnish it anew. Nearly everyone has some belongings which for reasons of sentiment or economy must be retained. Often from such pieces, whether of furniture, draperies, floor covering or ornament, a suggestion may be found which will supply the motif for the entire decorative scheme.

Even where there is no particular period suggestion to be followed, livable and charming rooms may be arranged and old furniture may be utilized in a way which will bring out its best value.

When, therefore, it is necessary to fit the new house with old furniture there are some points which it is well to bear in mind: first, in assembling the pieces for each room, select those best suited to the uses to which the room will be put, and which show relation to each other in form or material, also such pieces as have real decorative value, or those which will add to the convenience and comfort of the occupant without detracting from the appearance of the room. The treatment of the walls is a point which can usually be decided and, therefore, in such cases the walls may be selected to suit the furnishings which are on hand. It is generally a good plan to have such walls plain in color, as any figure in the furniture covering will be more easily reconciled.

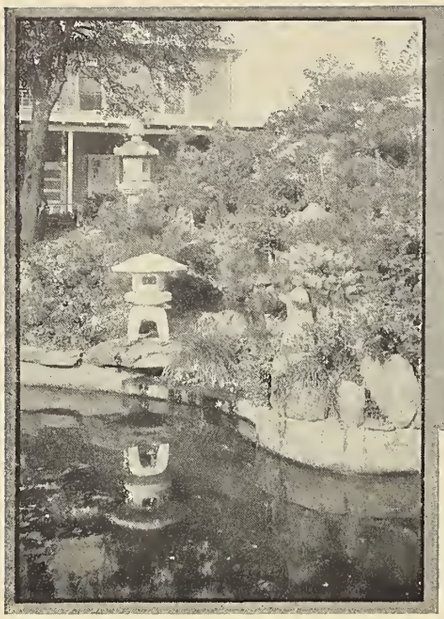
In such rooms as these it is quite as necessary to consider the decorative scheme collectively as where the architectural detail of the rooms demands a certain style of furnishing.

In bedrooms more latitude is allowed and they can be considered—to a certain extent—individually. If the color suggestion of the hall from which such rooms open is neutral in tone or unaggressive, it is not difficult to harmonize a variety of color effects for the different bedrooms. The walls of such rooms may be covered in floral papers, and with these plain draperies should be used, bringing out some color shown on the wall paper; or, if plain effects for the walls are preferred, gaily figured chintzes and cretonnes, or dainty embroidered muslins, for the hangings and furniture coverings may introduce the design and variety of color.

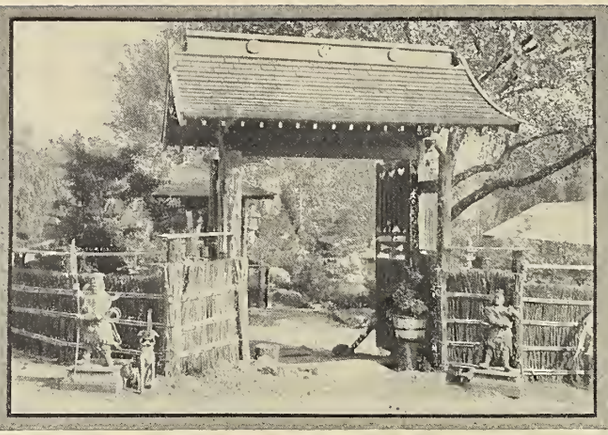


Even while preserving a comprehensive scheme of furnishing and interior decoration it is not necessary to sacrifice individuality

Consistent decoration does not necessarily mean period styles; it is achieved through an appreciation of fitness and color harmony



Reflections in the water are one of the Japanese gardener's greatest delights



Every Japanese garden should have its entrance gateway and enclosure. The fence here is of reeds and bamboo

This stone lantern is closely related to the traditional Japanese Tea Ceremony

Japanese Gardens for Winter Effect

ONE SOLUTION OF THE PROBLEM CONFRONTING ALL HOME-MAKERS—HOW TO HAVE YOUR GARDEN LOOK WELL THROUGHOUT THE YEAR—THE PRINCIPLES OF THE JAPANESE GARDENER'S CRAFT

BY PHEBE WESTCOTT HUMPHREYS

THE garden never lacks its enthusiastic supporters throughout the months from early spring until the autumn frosts lay its beauties low—all of us can very easily become "fair-weather gardeners," and many of us do. But most of us are satisfied to let it go at that and rest content during the winter months when the garden is in its long sleep. Of course we can have our window gardens indoors or our greenhouses or our house plants, but there is another thing that we may have to keep very much alive our garden interest through the months from November until March, and that is a Japanese garden. Of course even a Japanese garden will not look so well during the cold months as it does in the summer time, but it will look a lot better than the ordinary garden and a very great deal better than no garden at all. The reason is that a garden of the Japanese type depends very little upon flowers for its beauty, utilizing instead the more sombre and mysterious beauty of evergreens, wooden structures and accessories of bronze and stone.

One of the most attractive country places at Olney, Pa., is that of Mr. Louis Burk, and among its many noteworthy features is a Japanese garden situated just back of the old stone homestead. This it is that serves to furnish throughout the long winter months the charm of growing things out-of-doors.

On approaching the house through a long avenue of trees—still further beautified in outline by great clumps of ornamental plume grasses—one must pass up to the house and directly around it before there appears an enticing view, seemingly transplanted as a whole from some famous Tokio or Aomori garden of old Japan. The entire garden is enclosed by typical Japanese fencing of reeds and bamboo and a characteristic gateway of picturesque design is guarded by bronze warriors. Through the gate and above the fence one catches glimpses of a bamboo tea room; with a hill in the distance ornamented with rocks and mountain paths, stunted pines, flowering azaleas and the inevitable stone lanterns. Once within the garden, there are attractions on every hand; for one can study here varied types of Japanese gardening, though the whole is blended in perfect accord. A long rambling bamboo palm house outlines the southern border of the garden, along which the principal stream winds its rock-bound course, crossed by quaint rustic bridges, flanked by dwarfed Oriental growing things, and by attractive stone lanterns, while the walk which follows the course of the stream shows the irregularly laid stepping stones without which no Japanese garden is complete.

The entrance gates are curiously patterned affairs of wood and bamboo

At the further end of the long garden there rises the miniature mountain which gives another distinct feature to the landscape; and one can get a fairly good idea, on entering the massive gateway, of the "tea garden type" on the left, the "flat style" on the right, and the "hill garden type" in the distance. While Mr. Burk and his family take an intense interest in this charming bit of Oriental gardening, they have been content to leave the construction of its intricate details to an experienced Japanese landscape gardener, who thoroughly understands the mysterious and symbolistic and religious significance of the numerous accessories. And it is only after studying the work of one of these landscape artists throughout the process of garden construction from day to day, and learning the why and wherefore in the placing of ornamental features, that one can realize

A long palm house outlines the southern border of the garden—a shelter of poles and bamboo

A tea room is one of the features always associated with the Japanese garden of fair size

fully the mystical charm of this type of gardening. The true Oriental gardener will tell his enthusiastic patrons that though modeled upon an actual landscape, the Japanese garden is far more than a mere naturalistic imitation. To the artist every natural view may be said to convey, in its varying aspects, some particular mental impression or mood, such as the impression of peacefulness, of wildness, of solitude, or of desolation; and the Japanese gardener intends not only to represent in his model the features of the veritable landscape, but also to make it express, even more saliently than the original, a dominant sentimental mood, so that it may become not only a picture but a poem. In other words, a Japanese garden of the best type is like any true work of art, the representation of nature as expressed through an individual artistic temperament.

After consulting with various authorities on the subject, and interviewing the owners of some of the most famous American-Japanese gardens, I have found that the method of procedure is practically the same in every instance in Oriental garden building. The Japanese artist who is called upon to design a new garden will first examine the site, and will confer with his patron regarding its proposed size and character. If the site is large, and already furnished with natural hills, trees and water, the gardener will, of course, take advantage of these features. If it possesses none of them he will inquire the amount of money that can be placed at his disposal for the construction of artificial hills, lakes and the like; and this amount of money will also determine another important point, namely, the degree of elaboration with which the whole is to be treated. For all works of Japanese art whatsoever are rigorously divided into three styles, the "rough style," the "finished style," and the "intermediate style;" and the adoption of any one style governs the degree of elaboration to which any part of the design may be carried. If the rough style is chosen, even the smallest accessory detail—a rustic well or a stone lantern—must be rude to harmonize; if the finished style, no detail that does not correspond can be admitted—a restriction greatly conducive to harmony, and one to which the almost invariable congruity and unity of Japanese composition is due.

Knowing, then, the size and character of the site, and his patron's wishes as to expense and elaboration, the landscape gardener will next choose the model landscape, or landscapes, upon which he is to base his design. He will find them divided by convention into three classes: those representing "hill gardens," and "flat gardens" and a separate genus known as "tea gardens."

The hill garden class is the most elaborate, and that best adapted to large gardens, and for those where the natural site is undulating, or where money can be spent in artificial grading. The "hill garden" has many different species; such, for instance, as the "rocky-ocean style," which represents in general an inlet of the sea surrounded by high cliffs, the shore spread with white sea sand, scattered with sea rocks and grown over with pine trees trained to look as if bent and distorted with the sea wind; or the "wide-river style," showing a

(*Continued on page* xii)

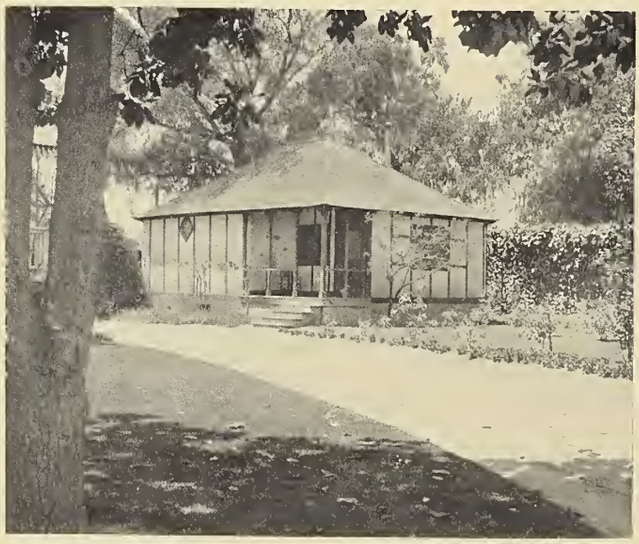
The Jap loves a bridge almost above all things, and frequently will build an island for the sake of the bridge over which it is reached

Stepping stones laid in designs combining beauty and utility mark every real Japanese garden

The rustic railing is more American than Japanese, serving as a harmonious connecting link between the design and its location

This stone and plaster house, with tile roof, is so planned as to give all important rooms the water view

This summer home in the Thousand Islands almost covs t entire area of its site



Canvas stretched over a wood framework forms the walls of this California tent house

Southern California has developed a very simple and honest type of low-cost bungalows

A modern Coloni ty Gecre

A glazed-in part of the porch forms a winter sun-room on this Colonial house in Nutley, N. J.

One seldom sees modern houses built along the lines of those dignified old mansions of the South

Those who have tried say tl sport tha

Walls of solid logs are by no means cheap to build; one often pays dearly for their picturesqueness

Whether of plaster, painted shingles, or clapboards as here, a white house harmonizes best of all with foliage

laid in Flemish bond. architect

This Garden City home will appear to greater advantage when the vines and shrubs tie it to its site

An open terrace joins the two covered porches on this shingled house at Douglass Manor

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The symmetrical two-story bay windows are unusual with a gambrel roof. Lawrence Buck, architect

Plaster houses are substantial, warm, attractive and cost little for up-keep. Ellicott & Emmart, architects

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A modern Colonial brick laid in Flemish bond. George Savage, architect

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The symmetrical two-story bay windows are unusual with a gambrel roof. Lawrence Buck, architect

Plaster houses are substantial, warm, attractive and cost little for up-keep. Ellicott & Emmart, architects

TYPES OF AMERICAN COUNTRY HOUSES OF VARIOUS STYLES, SIZES, COSTS AND MATERIALS

The asbestos shingle is a modern fireproof roof covering handled very much like slate

Wood shingles are the most common roofing material. The rounding off of edges is called "weaving"

The Problem of the Roof

WHAT THE AVAILABLE MATERIALS ARE, WHAT THEY COST, HOW THEY WEAR, HOW THEY MAY BE EFFECTIVELY USED AND HOW PROPERLY PUT ON

BY CHARLES EDWARD HOOPER

Photographs by J. F. Beals, M. H. Northend and others

THE problem of the roof—and it is a problem—is one that the average house-builder is called upon to solve for himself. To the man of unlimited means there are more ways of escape than are offered to the fellow with the slender pocketbook, who often is obliged to take what he would prefer not to have, on the score of economy.

The most common roof covering is the wood shingle. This should not be laid on a roof with a pitch of less than thirty degrees, and it stands to reason that, with any covering, the steeper the pitch the quicker the water will run off and consequently the less liability of leakage. The old-time hand-shaved shingle, which presented a wearing surface following the wood-fiber, had a much longer life than the modern machine-made shingle. The latter, while following the grain in a general way, frequently cuts across it slightly in such a way that, through the agency of sun and rain, its life is greatly shortened. Thus, the modern shingle has distinctly a right and a wrong side and should be laid accordingly.

Owing to the tendency of modern shingles to curl under the heat of the sun, they should be laid with a comparatively small portion of their sixteen inches of length exposed to the weather—say four and one-half inches. Even if the roof be steep it is not advisable to lay more than five inches to the weather for the above reason.

The life of a shingle roof is hard to fix absolutely; from ten to fifteen years might be a fair figure. Near salt air it deteriorates quicker than when inland. Being absorbent, the alternate wetting and drying, freezing and thawing cannot help but hasten decay. It is really economy in the long run to resort to some preservative. Such may be found in creosote stain; the creosote acting as a penetrating as well as a preserving agent, carrying with it into the pores of the wood much of the painty body of the coloring matter. Dipping is the only effective method of application and this should be for two inches more than the weatherage of two courses. A brush coat may be applied in addition, after the roof is laid, with excellent results. If ready-made stains are not readily obtainable a good substitute may be made from paint mixed with an equal amount of creosote oil. The paint should be of the desired color and of ordinary consistency. In this form with the creosote it makes a somewhat thicker stain than one can buy. To thin the above add more creosote oil; this will also cheapen it. It will cost about two dollars and a half, using the above formula, to stain one thousand shingles, outside of labor.

Of course if one wishes to collect his roof water in a cistern, creosote is out of the question. The alternative is to paint each course of shingle as laid, rubbing it well into the joints. As it is a nasty job and is bound to be more or less rubbed, a final brush coat is necessary.

The two great faults of a shingle roof are its comparatively short life and its inflammability. The cost of the former we may count on, but the latter is a constant menace. This is more particularly so in the country where there is no fire department, and where flying sparks, combined with dry weather, high winds and no water, make fire-fighting a hopeless task. Some experimenting has been done in the line of fireproofing shingles by dipping them in a mixture of lime and hot oil. As far as we know the practice has not been common enough to judge definitely of results. Lime is a preservative and the chances are that a newly treated roof would resist fire. The question lies in its durability.

We are used to thinking of a tin roof as a cheap affair and so it is at seven dollars a square (100 square feet). A good tin roof, however, is a different proposition. It is indispensable on flat pitches, where it is laid in sheets with a single lock joint, soldered and cleated and painted on the back. On such pitches as might be properly shingled or slated, the standing, double lock joint is used without solder, except the top and bottom of the vertical joints and perhaps the ridge joint. Such roofs have been known to last fifty years and over. Being put together practically without solder, they are not handicapped by that less

hardy material which wears faster than tin and is apt to give with the frost. Do not use paper under tin, as it invites condensation of moisture, and be sure that there is sufficient drip to the turn-down at the eaves and the rakes to prevent moisture from backing up under it.

A tin roof in itself will soon deteriorate and become useless; it needs to be painted in order to last. Use the best of paint, and preferably a regular tin paint. It will cost about three dollars per square, applied, and will last about five years. It should not be put on, however, until all resin and grease are washed off and that means the new tin should be left to the weather for a short time, but not until it rusts.

The modern pressed metal shingle made of galvanized iron makes a lasting roof. Be sure, however, that they are not made of steel, for the latter metal is usually not sufficiently well galvanized to stand the weather.

Copper as a roof covering will hardly be seriously considered by most builders owing to its expense, which is about four times that of tin. Owing to its considerable expansion and contraction it should be laid in small sheets and it should never be soldered to another metal on account of the unequal expansion between the two. Naturally long lived, it is seriously affected by salt air and by the various gases to be found in the large cities.

Slate is an old and tried friend. It has been used so long that it has tested itself out. On a steep roof it is excellent, although as the pitch decreases the rain is apt to work in under the butts and, in freezing and thawing, break the slate. This is its serious drawback, as the cost of replacing a single slate is all out of proportion to the area involved. Slate of the familiar gray-black tone costs but a little more than one-half the price of red slate. It is also stronger and less brittle. The ordinary size is ten by fourteen inches, laid five and one-half inches to the weather. Slate is laid on roofing felt, which insures a better bed with less liability of breakage, both in laying and in wear.

When speaking of tile we generally mean the "Spanish tile." The English type is little used and in size and shape is like a large slate, from one to one and one-half inches thick. Sometimes slate of these dimensions is used as a substitute for tile. The cost is about two and one-half times that of the ordinary gray-black slate.

Spanish tile makes a good roof, although it is heavy. Its usual color is a healthy brick red, but the same patterns are to be had also in green. What might be its great objection—that of taking in water at its joints—is largely obviated by bedding it in oil cement. The form of this tile has been imitated in copper and has the advantage of lightness together with the disadvantages of that metal—susceptibility to damage in certain localities.

Spanish tile, obtainable in red and green, seems the one logical roofing for some types of country home

The asbestos shingle, which is made of asbestos and cement is a comparatively new article. In its simpler forms it is like ordinary slate, but lighter. Its manufacturers claim for it a certain amount of elasticity, little tendency to cracking and less liability of exfoliating when exposed to fire than slate. In applying it is handled very much after the manner of slate.

In the selection of a roofing material we must bear in mind, besides the initial cost, the lasting qualities, the non-burning qualities, the fire-resisting qualities and the cost of up-keep. Tin demands and shingles are the better for a periodical treatment; other materials are supposed to take care of themselves. Tin soldered is non-burnable, but the solder melts under continuous heat. The standing lock joint therefore has the advantage, but it cannot be used on a flat roof. Slate will not burn, but it will crack and exfoliate under fire. Tile, being a fire product, will naturally stand more heat than slate. In the asbestos shingle, which is naturally non-combustible, the asbestos is an important factor, but the cement deteriorates under great heat. Whether its lasting qualities under such conditions are better or worse than tile we are unable to determine without comparative tests.

The initial cost of the various roof coverings, laid and complete, per square, are not far from the following:—best

(*Continued on page* viii)

Thatch is very picturesque, but too unsanitary for modern America

Slate is a trustworthy roof covering. It is obtainable in reds and variegated grays in addition to the common variety

An English trick of roofing with slate is the use of graduated weatherage

The outside cuts from chestnut logs were nailed to an ordinary stud frame, the chinks being filled with cement on wire mesh

A Studio of Chestnut Slabs and Cement

THE BUILDING OF A SUMMER HOME WITH UNUSUAL MATERIALS AND METHODS —USING WASTE CUTS FROM THE SAW-MILL TO HOLD THE COST DOWN TO $3,000

BY EDWARD FESSER

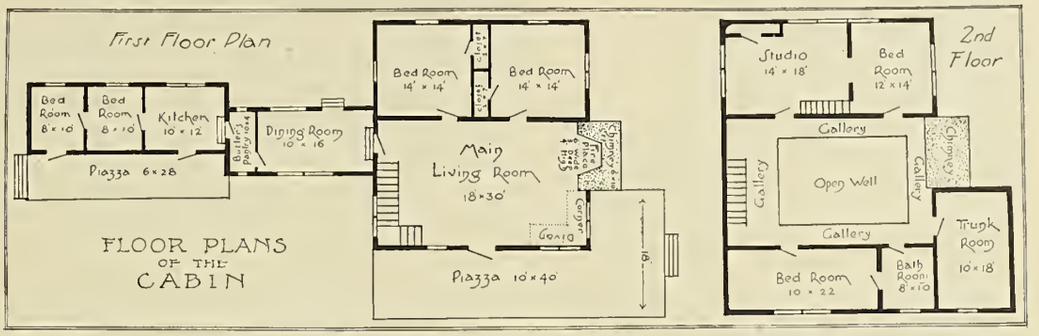
WHEN I first decided to build a studio in the country my ideas were very modest. I wanted a quiet place in which to work, with green trees all around and something of a view in the distance. I picked out a site on the highest and wildest portion of our old farm and went to work with an ax to make a clearing. When this was done I had a beautiful view of the Bronx valley with Kensico Lake below me in the near distance. I was careful to locate near a good spring which, fortunately, I found at a higher elevation so that the water would reach the cabin by gravity. My first impulse was to build a simple little log-cabin, containing a single large room, a big stone fireplace and a large studio window facing north; but my ideas began to expand when I contemplated the view I had made by chopping down the trees and bushes which had grown in this spot for years. I decided to add two sleeping-rooms—then, of course, I had to have a porch. The expansion continued by gentle gradations and I reasoned that by extending the walls upwards and with the same roof I could, with very little additional expense, have a second story. This would give me a good-size living-room, two bedrooms and a piazza on the first floor and, by running out a gable from the north side of the roof, I could have a large window, 8 x 10 ft., on the second floor and plenty of room for a studio over the two bedrooms. By this time I had caught the building fever and I finally determined to build an up-to-date rustic cottage, so I set about drawing plans to scale, located the nearest saw-mill and consulted a reliable carpenter.

I soon found out that it would be impracticable to build the cabin of whole logs, as there were very few trees in my immediate neighborhood that were sufficiently straight and of equal dimensions. The saw-mill, however, gave me the idea of using slabs which to all outward appearances would give an effect similar to that of whole logs. A slab, in the vernacular of the saw-mill, is the first outside slice of a log, retaining the bark; hence, in order to cut a square timber, there would be four slabs cut from each log. These slabs are practically useless and are used by farmers for firewood or to make pig-pens or rude fences and they are sold for $1.00 a double load—all you can haul away on one trip.

My first step was to secure a good mason for the foundations to the house, piers under the veranda and for the chimney. As the site chosen was on a side hill there was very little excavating to be done for the cellar; aside from this, building on a side hill always insures good drainage. The next step was to get a contract from a reliable carpenter—after bids had been received from several—for the framework, the roof, floors, partitions, stairways, windows and doors. All the rest of the house I finished myself with the assistance of a competent man who was handy with tools.

The first operation was to sheathe the whole exterior with slabs, nailing them firmly to the studding and leaving a space of from half an inch to an inch between the slabs for the cement sealing. Next I procured some half-inch wire mesh and cut it into strips sufficiently wide to cover the open spaces between the

slabs. The wire mesh strips I then tacked over the open spaces from the inside with half-inch wire staples. I then mixed some brown-hair mortar —with a generous amount of hair— and about one-quarter Portland cement and laid it in with a narrow pointing-up trowel both inside and outside over the mesh between the slabs. This forms an unbreakable "clinch" and prevents the cement from chipping off and falling out. The outside of the building will probably have to be gone over after a year or two and patched in places, as the slabs will season and shrink; but this can easily be done with the aid of a long ladder.



The main living-room extends up to the roof, with a gallery around over all four sides

For the outside cement panels I used any old boards for a background, then beveled two sides of ordinary laths in such a way as to form an undercut groove when the beveled edges face the panel. I nailed these laths three or four inches apart on the wooden panel and plastered the whole surface with the same proportioned mixture of mortar, hair and cement as was used in sealing the slabs. After the plaster was thoroughly dry, the panels were tinted red with ordinary shingle stain—the same tint being used for the shingle roof, which will be found very effective to relieve the sombre tone of the exterior.

For the piazza posts I cut whole locust trees showing seven or eight inches at the butt end, smaller pieces for the railings and still smaller pieces for the filling in. Locust has a very rough bark and will blend well with the chestnut slabs of the exterior; besides this it is a very hard wood and the weather will not affect it. This completed the exterior and the work of fitting up the interior was begun.

For the stairways white birch was used for making the newel-posts, railings and other odd fittings. The same scheme was carried up right around the open well. White birch is a soft wood and may be used only for interior work, but great care should be used in handling it when green, as the bark is very tender and will curl up when bruised or cut. After it has thoroughly seasoned, however, the bark and wood become hard and fixed. For the trimming to doors and windows I picked out the wood of the young chestnut, which is a smooth gray, dappled with lighter spots. Large, irregular knots, here and there, will add much to the general effect. The whole interior of the cottage was then sheathed with $\frac{7}{8}$ x 7 in. tongue-and-groove North Carolina pine which is the cheapest sheathing in the market (the cheapest sheathing can be used as the walls will all be covered up with some textile material). If the cottage is to be used during any portion of the winter months, it would be well to insert between the studding, so as to leave an air space between it and the slabs, some good felting, several kinds of which are obtainable at reasonable prices. This felting keeps out cold, keeps in heat and, besides, is sound- and vermin-proof; it will add only about one per cent to the cost of the building. Then make a perpendicular wainscoting all around the living-room, four feet high, using the rougher wood with the bark on of chestnut, hickory or oak and cap it with a six-inch shelf. By using different woods for different rooms the same scheme may be carried out with slight variations throughout the house. If red cedars are plentiful in the neighborhood a very attractive and sweet-smelling den can be wainscoted with this wood by having the cedars sawed in half through their entire length and alternating the butts with the tips.

As my builder, in his contract, was to supply the doors and windows, I had to specify the kinds wanted. The front door should be $4\frac{1}{2}$ x 7 ft. and patterned after the old-fashioned Dutch doors, of massive build, made in two pieces cut horizontally in the center, using some hard wood, such as oak or chestnut, showing a prominent grain. The door is stained a dark bottle-green and the beautiful grain of the wood stands out conspicuously.

For the windows specified "casement" throughout the house —the lower floor square panes, 16 to the sash, and for the second floor the small diamond panes.

(*Continued on page* viii)

White birch stair and gallery railings and furniture brighten the living-room, which is wainscoted with slabs, the upper wall surface being covered with Java mats

There can be no practical objection to a porch when the adjoining room is lighted on both sides as well

Leaving the porch roof uncovered excepting by the vine-bearing rafters insures a more cheerful interior

The paved open terrace will in time supplant the porch. "Maxwell Court," Charles A. Platt, architect

The Porch and the Paved Terrace

THE ADVANTAGES AND DISADVANTAGES OF EACH—WHY THE PAVED TERRACE, UNCOVERED OR COVERED BY AWNINGS, IS GAINING ADHERENTS EVERY DAY

BY JARED STUYVESANT

Photographs by M. H. Northend, J. T. Beals and others

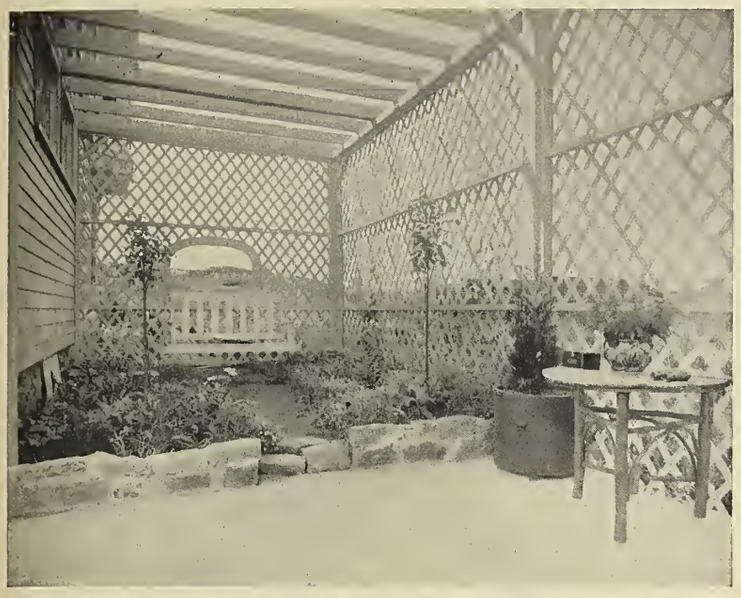
THE porch is so distinctively an American institution that it seems heresy indeed to say that it is losing its hold and will some day be seen only on old houses. Considering the fact that we Americans are coming to live outdoors more than ever before, and also that we are building our houses out in the country, where the porch has for so long reigned supreme, my first statement needs some explanation. It is not that we are losing our taste for living in the open but that we have something that better fills our needs for an outdoor living-room. The paved terrace, uncovered or sheltered from the sun by awnings or by a vine-covered pergola, has all of the advantages of the porch with none of its disadvantages. Excepting shelter from rain, you say? —but you do not sit on the porch in the rain, or if you do you may just as well sit inside the open French windows leading out upon the terrace.

The great trouble with the porch is that, as usually located, its roof darkens the best rooms of the house. It is almost essential that the porch be built out from the living-room and if it does occupy this position it means that one-half or one-third of the light for that room is almost shut off entirely, to say nothing of the same effect upon the hall and perhaps upon the dining-room as well.

Both porch and awning-sheltered terrace are provided in this house designed by Guy Lowell, architect

Occasionally architects have avoided this handicap to some extent by building the porch out from one end of the house with its shorter dimension against the house wall. A porch standing free, as it were, is the kind to build if you really want a porch. The question is, though, does not the terrace fill every function that the porch does and in a better manner?

There seems little doubt—if you are convinced that a terrace is the thing to have—that it should be paved with brick or some durable material of that kind. Wooden terraces or deck porches, built to shed the water and properly protected by paint, will last many years. Paving, however, of brick, of square red quarry tiles or of cement, or of a combination of two of these, seems more



Mr. John Kendrick Bangs has a lattice-sheltered terrace with a garden at one end on his Ogunquit (Maine) home

With the open terrace the mid-day awning shelter may be rolled back leaving the place open to the breezes and stars at evening

appropriate. Awnings are perhaps the most commonly used devices for sheltering the terrace when the sun is too strong. There are other ways of securing the desired effect, however, one of which is shown at the top of the preceding page, where a pergola motive has been used. Another scheme of somewhat similar nature is that shown in the first picture at the top of this page, where Mr. John Kendrick Bangs has sheltered his terrace with a lattice at the sides and merely the open rafters above. The latter, of course, will in time be partly covered with vines. This terrace has a splendid suggestion also in the little garden at the end, which comes very near making the ideal outdoor living-room.

Another development of the terrace, resulting from the need for vines, has been carried out in several New England homes. A lattice, either flat on the wall at the side of the front entrance, or sheltering the latter in the form of an arbor, has been put up, and a hole some two feet square left in the brick or tile paving just at the side of the foot of the lattice, in which vines may be planted.

It is a rather common impression that a brick-paved terrace is an expensive luxury. As a matter of fact it may be no more costly than a porch of the same size. The filling in for the paving may well be of cinder and if this is well tamped down and covered with several inches of sand, the paving bricks may be laid upon this without cement. This makes a thoroughly satisfactory job, particularly if the bricks are laid to slope slightly towards a drain at one or two points. This drain may consist of a piece of terra-cotta pipe extending down through the cinder filling and covered at the top on the paving level with a perforated iron strainer. This will not appear nearly so conspicuous as it sounds. If the terrace is not very wide it may be sloped to the outside edge so that it will drain off. If wood is used for the floor it will be necessary to slope it in the same way.

Unless the terrace is almost or quite flush with the level of the ground some sort of a boundary wall is needed. This, of course, would have to be laid up with mortar and will look much better usually if broken at intervals and at the corners by piers of slightly greater thickness. The top course of bricks may extend slightly over the wall to give a drip, or a capping of bluestone or cement may take its place.

Cement used as a paving material for the terrace is rather monotonous and cold if used alone. There are ways of getting around this, such as using cement panels between brick borders. Red quarry tiles, too, will serve as a framework for the cement, and occasionally the latter itself is colored by the addition of dark sand or mineral coloring matter. As a general rule, however, it is better to depend upon a companion material to supply the required warmth, leaving the cement in its natural color.

This porch is the tail that wags the dog, darkening besides the important first-story rooms of the house

A wooden-floored deck porch is durable if sloped and well protected by paint, but brick, tile or cement paving is more suitable

Practical Talks with Home-builders

THE IMPORTANCE OF CHOOSING AN ARCHITECTURAL STYLE FOR YOUR HOUSE THAT WILL BE IN HARMONY WITH THE SITE AND WITH THE HOMES OF YOUR NEIGHBORS

BY ALEXANDER BUEL TROWBRIDGE

[*This is the third of a series of intimate, helpful talks with those who are about to build. The aim is to offer untechnical suggestions to prospective home-makers in the hope that many of the usual mistakes and difficulties may be avoided through foreknowledge. The talks are written for those of moderate means rather than for those to whom economy is no object.*]

IN the December number of this magazine the superiority of Colonial architecture for domestic structures was ably argued by an enthusiastic lover of that kind of architecture. In the present number an admirer of half-timber houses tells why he prefers that kind of design and construction to other forms. Enthusiasm for one style in preference to others has long been a tendency among architects. It is not intended in this short talk to take issue with these individual advocates—their articles were written with the idea of clarifying home-builders' ideas regarding style—but to point out how, under certain conditions, each is right but that none is correct if he seems to advise the use of one style for all cases.

In choosing a style the external environment and the internal equipment should dominate any tendency to follow fashions or abstract advice. By environment is meant the character of surrounding buildings, if the site be in a somewhat crowded suburb; and the nature and contour of the ground as well as the character of the trees and foliage, if the site be in the open country. Thus, if an owner intends to build on a suburban lot and finds that his neighbors have already established a formal atmosphere through the use of symmetrical houses of a classic or Colonial type, it would indicate better taste not to introduce a jarring note by building a picturesque, unsymmetrical house in vivid colors. Some owners, without giving careful thought to the matter, are inclined to think that something new and original in such a community is not only an owner's right but is what would be welcomed by the neighbors. As well expect a community of typical New Englanders who live and dress quietly, to welcome into their midst the family of a Bowery sport. An owner should pay some heed to the tastes and the characteristics of his neighbors if he intends to become a useful and considerate member of his community. If he builds in the open country with plenty of land and an abundance of trees, the style should be chosen through a study of the most successful houses that have been built upon similar sites in this country and in Europe. In one instance a quiet white or Quaker gray farmhouse would be fitting, while in another, a free composition in cement or half-timber work would seem the most appropriate.

While these considerations are of great importance, the internal equipment should receive even greater thought. For example, an owner possessing Colonial portraits and good Colonial furniture should not allow an architect to insist upon a modern European house or even a modern cement house. We cannot escape the influence of tradition, and, try as we may, it is out of the question to place Colonial furniture entirely successfully in a house trimmed in oak, cypress, chestnut or any of the popular dark finishes which form an important feature of modern country houses. Portraits, settles, tables, sideboards, etc., if they are worth keeping, should have much to do in determining the character of a house interior and its plan. A severely plain Colonial portrait looks foolish and ashamed in a Louis XV salon. Yet so great has been the desire in some instances to acquire ancestral portraits, and at the same time to be in the prevailing fashion with respect to style, that similar incongruities have been frequent. If the furniture possessed by an owner is not really distinguished yet represents a costly outlay, the situation is trying and needs courageous action. The house should then be designed with regard both to its external environment and its *future* interior equipment. If the owner does not feel like disposing of his furniture at once let the house be designed in harmony with furniture of the best type, with the understanding that the change in equipment will be made at a more convenient date. It would be better to do this and live for a period in the midst of inharmonious surroundings than to permit the entire character of the house to be determined by the costly, inartistic furniture.

There are many owners who have no special fondness for traditions and who care more for soft tones, strong useful furniture and home comforts than for surroundings possessing pedigrees. These may as well frankly eschew historic styles and call upon the architect to produce an artistic ensemble, in which case he should advise in the selection of the entire interior equipment. If such an owner settles in a Colonial neighborhood, yet has no intention of imitating his neighbors, the proper solution would be a quiet cement or stucco house with dignified proportions, formal rather than picturesque mass, and with quiet colors. This would not disturb the character of the neighborhood and the interior may be worked out in as modern a spirit as the designer may wish to use. Sometimes notable results in good color and charm of design may be achieved in a house of this sort for the reason that there are no hampering traditions, and the great freedom permitted the designer serves to stimulate his imagination.

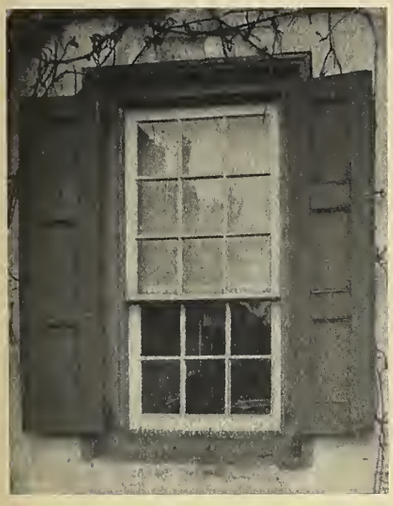
There is one other point of view which should enter into this discussion, namely, the type of garden, if any, which should accompany the house. The architect, even if he be not an expert horticulturist, can give good advice as to whether a formal or an informal garden would fit in well with the type of house decided upon. If, on the other hand, the owner is an enthusiast in garden work and has made it a study, the architect should find out the kind of garden the owner intends to develop so that he may be sure that the house will be designed in entire sympathy with it. For example, many people care more for the old-fashioned garden of informal shape and semi-wild flowers than for the neatly trimmed sophisticated formal type. To the sensitive mind there is a vast difference between the sentiments expressed by these two widely different types of gardens, and the houses fitting them should be fully as different in sentiment. It is of the greatest importance that the architect should acquaint himself with the various tastes of his clients and it would be a material help to him if they would take the initiative and tell him, with entire frankness, their tastes in colors, books, pastimes and something of their home life.

After all the most important point is the suitability of the home for its owner, though extreme individuality in a design must sometimes be curbed by business considerations. If a house is to be occupied by people of moderate means it must be readily salable, and consequently not too unusual in design to meet the needs of an ordinary purchaser.

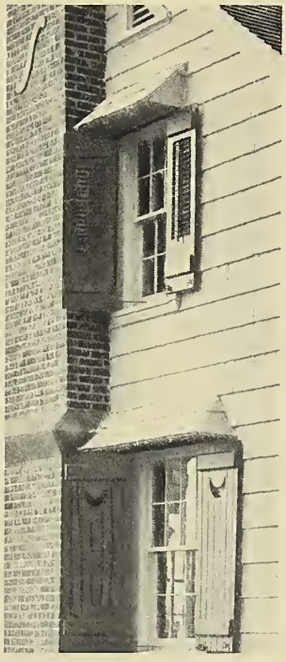
An old window on which divided blinds permit easy regulation of light

This scheme of double-hinged blinds cuts off the sun without keeping out the air

An unusual division of the blinds on the old Wilson house (1807), Baltimore



Modern shutters are seldom built on these simple sturdy old lines



Battened shutters are best suited to windows in farm-house types

Simple and dignified solid-panel shutters on an old stone house

An unusual pattern of cut-outs on a Flemish bond wall in Washington

TYPES OF OUTSIDE SHUTTERS

Solid panels in the blinds give a more substantial effect. Aymar Embury, II, architect

A heavy battened type with wooden bolt and fixed lower panels. Alfred C. Cass, architect

The crescent seems to be overworked as a cut-out pattern

Planning the Garden on Paper

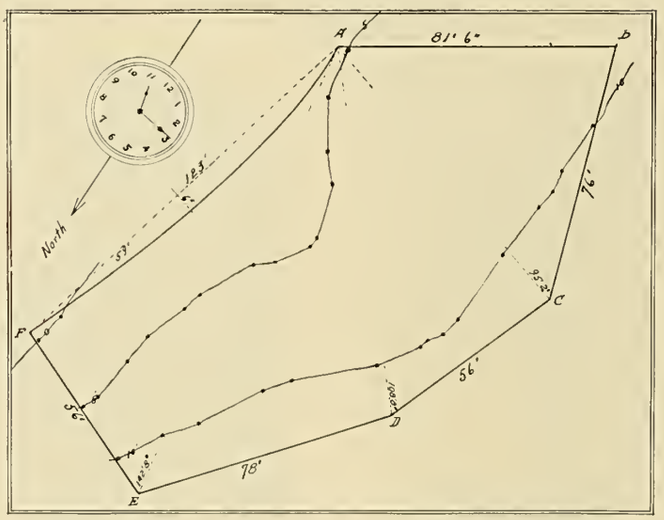
MAKING A SURVEY AND A TOPOGRAPHICAL MAP WITHOUT INSTRUMENTS—THE FIRST ESSENTIAL IN MAKING A SUCCESSFUL HOME PLOT OF ANY SIZE OR SHAPE

BY E. O. CALVENE

THE task of representing a square or rectangular plot of ground to scale on paper is of course a very simple one, but when the form is irregular, difficulties arise—difficulties that grow in ratio with the irregularities. Yet before any garden planning can be done on paper, the garden site must be transferred from the earth to the drawing board.

The simple solution of the problem is an engineer's survey—but it is not the only one, under ordinary circumstances; and it isn't the economical one. For places above two acres I should advise it, however, as an amateur will pretty certainly fail of accuracy in undertaking anything so extensive, unless it is the simplest square, and level into the bargain. This a plot over two acres in extent is very apt not to be.

But if you are the owner of less than this much land and have patience and an intelligent helper, there is absolutely no reason why you cannot do it yourself, satisfactorily and as accurately as need be. Provide a drawing board of convenient size to carry around outdoors, a pencil with eraser attached, any piece of manila paper that is available—which tack firmly to the board—a tape-line 50 feet long or a line measured to that length by a yardstick, and a second line, or even two, 75 to 100 feet long; also a half dozen sharpened stakes and a stone or hammer to drive them into the ground.



A watch, a tape-line, a cord and some stakes are all the instruments necessary for an approximate survey of your property

Thus armed, go out and begin at the longest straight boundary. Measure the length of this straight line, calling it A B, and draw a line any length upon the paper, setting down upon it the figures denoting its length—81 ft. 6 in. Pay no attention to how long you may actually draw the line as that does not matter now; only leave room enough on your paper for as many lines as you are going to need. Pass on from the point B to C, measuring and setting down that distance—76 ft.—on B C. Now take a measurement from A to C; this will determine the angle formed by A B and B C later, when you come to making the drawing accurately and to measurement. Set this distance A C down upon a dotted line drawn to connect these two points. In the plot used for illustration it was 95 ft. 2 in., but you may have the two lines already drawn diverging at an angle which makes this line much shorter on the paper than the others. Never mind—that is of no consequence now, as will appear presently.

Go on from C to D—56 ft.—then across to A again—108 ft. 8 in. that records—setting each down on the line representing it; and so on until the last measurement, that from F to A, is made. While the line is stretched between these two points take a measurement—or several—from it to the curving boundary which falls within it, thus finding the depth of the arc which this forms. Note how many feet from one or the other end on the straight line these measurements are and set down the figures both ways. For example, at a point 59 ft. from F the arc measures 6 ft. deep, so 59 ft. goes down on the long line and 6 ft. on the line crossing the arc.

With the data thus collected go in the house and proceed to lay it out to scale upon a fresh and suitable piece of paper. A convenient scale is 8 ft. to 1 in., which is an eighth of an inch to the foot, of course. This does not make a drawing too large for comfort if the subject is an average place, 100 ft. being represented by 12½ ins. A sheet of paper 30 in. square will leave a goodly margin, therefore, around a plot 208 x 208 ft., which is, roughly speaking, one acre.

A map will be sufficiently accurate for all practical purposes if measurements which you have obtained in inches are transposed to fractions of a foot. Divide an eighth of an inch into four parts on a folded straight edge of heavy paper, if you have no scale ruler available, dotting the little quarters with a fine pencil. In each quarter of a foot there are of course three inches; the initial line A B, which is 81 ft. 6 in. long, is therefore 10⅛ in. and one-half of an eighth of an inch, long. Draw this the proper length and proceed from B just as you did out-of-doors, getting the point C by measuring the angle from A. An easy way of doing this, without having to measure and experiment in a tiresome fashion, is to lay off the distances B C and C A on two folded strips of paper. Lay the point representing C on one over the same point on the other, and hold them together by a thumb-tack—or a pin—passed directly through the point itself. With a pin through one slip at A and another through the other at B fasten A to A and B to B—and C will fall where it belongs. Drive the pin representing it down into the drawing to mark its exact location.

Locate each successive point in the same way and you will find your map taking shape with surprising facility. The curving boundary is drawn from a dotted straight line connecting F A, with measurements first laid off on the paper just as they were taken in the outdoor work. So much for the outline.

Contours are not so simple, yet they are by no means difficult. But they take more time and patience and can, of course, be only approximated without instruments. This is all that is necessary, however, unless terraces and elaborate architectural features are to be contructed. For these an engineer's survey and plan is imperative.

Five-foot contours are usually shown on a map of the scale recommended. They are represented by a series of irregular lines running across it in the same general direction, at distances varying greatly sometimes, from each other. To understand them exactly, what they mean and how they are determined, it seems to me that the supposition of a series of water marks, left by a flood, receding gradually, is the greatest help. Starting with a complete inundation of the land in question, which exactly

(*Continued on page* xiii.)

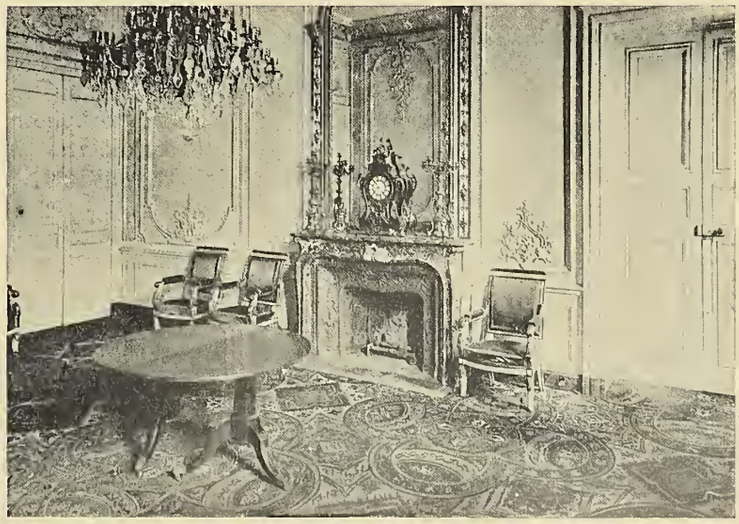
The woodwork, ceiling and furniture are all in perfect keeping in this English sitting-room

Gothic detail in fireplace, ceiling, furniture and even the table lights, characterize this living-room

Many people take deep satisfaction in furnishing and decorating their Colonial bedrooms true to the very letter of the style

Individuality, consistent to the smallest detail, runs riot in this Western interior designed by Frank Lloyd Wright, architect

Col. A. A. Pope's library demonstrates that a room may be thoroughly harmonious without slavish adherence to any period style



Period decoration as found in France. In America most of us are perfectly content with a less literal interpretation

SIX CONSISTENT INTERIORS

The old and the new. The cellars of old houses were little more than a black hole in the ground; to-day cellars are dry, light, clean and useful. A boys' play-room occupies one end of the cellar in the modern house above

Making the Most of the Cellar

SOME OF THE PITFALLS TO AVOID WHEN PLANNING THE DWELLING'S FOUNDATION—PRACTICAL HINTS ON THE WAY CELLARS SHOULD BE WALLED, PAVED AND KEPT LIGHT AND DRY

BY GARDNER TEALL

NO labyrinth of ingenious confusions, no maze of perilous passages ever quite equaled the inconveniences of a poorly planned cellar or one that has not been planned at all. In warm countries the cellar has been wont to be regarded merely as a necessary hole in the ground; in cold countries as a hiding place for the Leviathan-like furnace heating-plant, whose myriad of bewildering pipes overhead continually conspire to brain the unwary explorer of the cellar's depths, who, groping hither and thither in a half light more useless than Stygian darkness, could have no hope of emerging whole in body and in temper, unbesmirched and unbumped.

The cellar of to-day is quite another matter, roomy, well lighted, heated, ventilated, and fitted with some indication, at least, of those respectable attributes a cellar should long ago have taken unto itself.

Let the man who contemplates building a house free himself from a common impression that a cellar is an unavoidable evil, and realize, instead, that it is a very necessary good. His first consideration will be the fact that one may not always choose the precise site on a lot that would be the best suited to building conditions, since necessity quite as often as choice dictates the exact location for the house.

But let it be borne in mind that the question of drainage is much simplified if the house can be built on high ground, and also that water passes through a gravel-and-sand soil much more quickly than through clay soils, an important thing to remember because every cellar should be absolutely water-tight in its construction.

Apropos the matter of soil the prospective house owner will not regret it if he has specified in the excavation contract that at least twelve inches of the top soil be removed and piled by itself as an after dressing when the lot comes to be graded.

It is generally agreed that the excavation for a cellar should be about two feet wider on all sides than the cellar itself. A tile drain with open joints will offset the chance of dampness. This drain should be run along the outside of the walls, at least six inches below the cellar bottom, and it should be connected with some waste pipe that leads away from the house. The trench should then be filled in with broken stone to a depth of fully eighteen inches.

The old-fashioned pole drain, made by laying poles of wood lengthwise in the surrounding trenches, should long ago have been superseded by modern methods, inasmuch as these poles soon rotted, defeating their purpose. The same objection may be advanced against the box-drain.

Because a rock or clay soil holds the water, more or less, cellars dug in such soils must be made especially water-tight. In such a soil a four-inch concrete floor should be laid on an eight- or ten-inch foundation of broken stone. This serves to keep the damp from rising into the cellar.

With a sandy or gravel soil the concrete may be laid on an inch foundation of Portland cement.

Portland cement is considered about the most effective coating for the exterior walls of the cellar also, but carelessness on the part of the workmen who have this part of the building in hand often leads to negating many of its virtues.

As an extra precaution where cellar walls are laid in clay or rock soils, several coatings of boiling hot asphalt should be applied outside the walls and over the concrete bottom, which may then receive another layer of concrete.

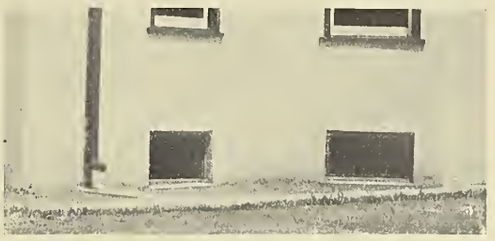
As for the walls themselves, concrete is superseding, to a very great extent, natural stone and brick. Brick, all the way through, should never be used for the cellar walls except in very dry countries. Limestone is probably more nearly impervious for walls than any other native material, but when using it a mason who knows his business will take good care that no single stone runs through the depth of the wall. If it did it would serve a sort of "frost-conduit," in winter weather.

Just here it is well to give a warning against the practice of permitting rubbish to accumulate between cellar walls and surrounding earth during the course of the house construction. If this matter is overlooked it is more than probable that storm water will accumulate in this "sponge" and effect permanent dampness.

Cellar dampness causes mold, decay, and rust, and produces an environment no more fit for a human being to step into than that

Do not obstruct cellar windows by too close planting

If the house sets low on the ground, areas will allow larger cellar windows



Lead the water from rain conductors away from the foundations

of the Black Hole of Calcutta. Even if old walls are damp, sanitary engineers have devised ways of correcting this peril, and the householder cannot afford to neglect investigating the matter.

As one must always anticipate and obviate the possibility of a new house falling into an unsanitary condition as years go by, it is best to have all the horizontal house drains and connections thereto laid in conduits that will have been left in the floor of cement. Cast-iron cover-plates, flush with the floor level, can cover them, thus leaving everything where it may easily be accessible and inspected at a moment's notice. In fact, nothing should be placed under the cement floor, generally speaking, but the open-jointed tile drains for the sub-soil.

Cellar pipes that have to be run anywhere through the cellar or along its walls should never require protective coverings such as asphalt, coal tar, etc. Pipes should not rust in a dry cellar.

The drainage of the cellar floor is also a matter of the greatest importance, and the level should be so graded and drained as to permit the floor to be cleansed frequently. How many people in old-fashioned houses wash their cellar floors? And yet they would be horrified at the thought of a speck of dust in the drawing room. Above all things plan for a cellar floor that can be scrubbed often and conveniently.

The ancient and decrepit practice of letting the furnace turn everything else in the cellar topsy-turvy is vanishing from the list of home-building abuses. There was a time when vegetables, preserves, food, milk, and butter had to take a back seat and yield their throne to clumsy coal-bins, overflowing ash barrels, and all the debris the nether world of the old-time cellar could attract through the course of various generations.

Now all that is different. The heating-plant is given plenty of room, but modern systems have been kind to the needs of the potato as well, and the designer of a modern heating-plant works in harmony with the architect, no matter how small and unpretentious the dwelling is to be. Thus there is always left proper room for a well planned dark closet for winter vegetables, a fruit closet and a food room, a laundry, and often store and other rooms. Indeed in one hillside house that has come to the writer's notice there is a fine play-room for the boys of the family, built on the side of the higher wall.

This suggests that, in the properly constructed cellar, it is often advantageous to place a work-bench and tool-chest, especially if there are no outbuildings that can be utilized in this way. There is always much "puttering" and amateur carpentering of all sorts to be done around a house, month after month, and it is, therefore, convenient to have a place where work of this sort may be carried on.

Your architect should plan for the storage of fuel if this is to be kept in the cellar. If you have a ten-room house your bin for furnace coal should have a capacity of twelve tons, if you plan to put in your winter's supply at one time. The iron-lined chute should, when possible, be built into the house, to conduct the coal to the center of the bin. This chute will have to be planned with reference to its being accessible from the street when the coal wagon drives up. The old practice occasioned dumping the coal in through a window over the bin, but this is anything but a tidy or convenient mode of handling fuel.

Let the walls of the coal-bin be dust proof, as well as the ceiling overhead. The additional cost, if added before the contract is awarded, is very small. Another thing to plan for is the sloping of the floors of coal bins towards the opening, so the fuel will "flow" to the front of the bin as needed.

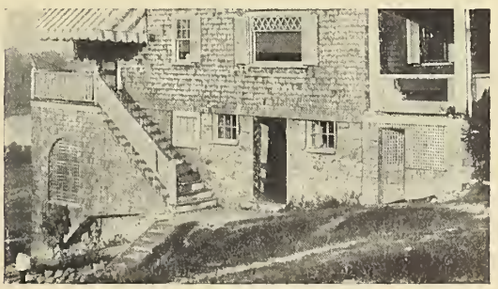
The cellar's outdoor entrance should, of course, be as near the ash-barrels as possible, in order to facilitate their removal.

We often see cellar windows all grimy and dusty, if, indeed, they let in enough light to enable us to see them at all. Moreover, lighting from the outside should never be permitted to be interfered with by the training of vines over the window openings, although this is often done. Then every cellar window should move easily upon its hinges, preferably swinging in and up, to facilitate proper ventilation.

Of course the problem of remodeling the old cellar is one that quite as often confronts us as that of planning a new cellar for the-house-to-be. If one has an old-fashioned cellar and cannot go to the expense or inconvenience of extensive remodeling, at least a great deal can be done by making up one's mind to clear every particle of rubbish out of the old one, and to bring forth into the merciless light of day all the "junk" that has been allowed to accumulate in the limbo deserted by all sensible Lares and Penates. A householder once declared that you can forgive an attic its sins of accumulation, for things in it can get no higher, but you cannot forgive an untidy cellar its mussiness, for things could get no lower! A little thought, a little planning, a little work, a little paint, whitewash, putty and cement, and a great deal of housecleaning, will lead one to discover how to make the most of a cellar and to take some joy in doing it.

Brick foundation walls are practicable only in dry climates

Terracing in front will offset the stilted effect of a high cellar



On steep slopes the cellar becomes as important as any story

Inside the House

Edited by Margaret Greenleaf

The Editor will gladly answer queries pertaining to individual problems of interior decoration and furnishing. When an immediate reply is desired, please enclose a self-addressed stamped envelope

Reception Hall and Library

I WOULD like to have some assistance from HOUSE & GARDEN in the matter of interior decoration.

My dining-room has oak furniture, wall paper in grape design in browns with a glint of gold. I wish to keep that as it is.

My library is 14 x 20 ft., two windows,—one south, the other east. I wish to build a bay-window with fireplace in center and windows on each side, at the east end of the room which is fourteen feet wide Advise whether fireplace should be all brick, built to ceiling, or shall I use a white wooden mantel to match white woodwork; also as to wall decorations.

My reception hall lies north of the library; it also has white woodwork. How shall I decorate it? As they open into each other I would like the same coloring for both. Hardwood floors and rugs on the floors, mahogany furniture in both rooms. The rug in library has a great deal of old blue. Rugs in reception hall will go with any color. Double doors between reception hall and library, also between library and dining-room.

We are pleased to send you the following suggestions for the treatment of your library and reception hall, noting that the grape design in brown, gold, and olive green has been used in your dining-room.

We recommend for the wall of both reception hall and library a bronze paper. This you will find will harmonize beautifully with that used in the dining-room. While the effect of this paper is practically two-toned in certain lights, one finds a glint of dull old blue and yellow underlying the bronze. The design of the paper is modified Colonial and very attractive.

The ceiling tint should extend at least 18 inches from the ceiling angle, and be finished by the picture rail. This tint must be quite yellow in tone, like the sample we send you. This, you will find, will sufficiently lighten the room.

The same color should be used in the draperies at the windows of the reception hall, and in the library dull blue will be found particularly harmonious with the wall covering and also with the rug you describe.

Regarding the mantel, we would advise that you treat this with the ivory white enamel, matching the woodwork. We send you some simple designs of mantels which are pure Colonial, and would be suitable to your rooms. These can be purchased ready to set in place.

In the Shops

MANY shops are this season offering some delightful decorative suggestions of brass and copper in the form of candelabra, candlesticks, trays, loving cups,—which latter, by the way, may be converted into the body of a most artistic lamp,—desk sets, picture frames and book racks. There are few rooms the beauty of which will not be enhanced by the introduction of one or more of these pieces. The prices are by no means prohibitive. For lamps made from loving cups, or where plain porcelain jars form the body, shades of raffia or wicker, loosely woven and lined with a plain colored silk, are particularly decorative.

Lamp shades of raffia or wicker go well with a pottery base

Plaster pieces in medallions, broken friezes and figures prove good investments, giving an excellent decorative return.

A very charming treatment of a Madonna and Child in a medallion relief shows the ivory tone of the plaster against a strong blue background, this effect being obtained by staining the plaster.

Window Shades

I WOULD be very glad if HOUSE & GARDEN would inform me of the best window shades to use. I would like something that will obscure the light, and also show the correct color for my house. The exterior is painted maroon with ivory white trim.

We are pleased to send you samples of a duplex shade material, having the two faces in different colors. These shades are very satisfactory and by using them the necessity of double shades is done away with.

As the exterior body of your house is maroon with ivory trim, you could use the ivory on the street side, or have the shade made especially to match the color of the house, using the ivory for the interior; otherwise the interior could be in a soft tone of leaf green.

These shades will be found to obscure the light wholly. They are put up with the best rollers, and if correct and accurate measurements are supplied, there is no

difficulty in having an order satisfactorily filled.

Arranging Colonial Furniture

SEEING your generous offer in HOUSE & GARDEN, I have come to you for advice. I am building a six-room cottage with a kitchen, dining-room and living-room on the first floor. The dining-room and living-room have a sliding door between them, and the kitchen is back of the dining-room.

I have an old Sheraton sideboard, a Grandfather's tall clock, an old sofa, long and narrow with beading on the frame, an old-fashioned round table and several chairs—one chair that has curved legs, square back with one straight piece half way from top piece to the seat; this has an upholstered seat; then a fancy shape chair with spindle legs and rush bottom and a Gothic chair with twisted back and legs and upholstered seat. This last looks something like chairs you see in church chancels sometimes.

All of the furniture mentioned is mahogany and I have a long looking-glass, with mahogany frame. Would you put this over the mantel in the living-room? Kindly advise curtain and upholstery materials and say what kind of rugs should be used upon the floors.

I have two brass candelabra, with three candles each, and the long glass pendants. Must I put these on the sideboard in the dining-room? I also have two small brass candlesticks. Should these go on the mantel in the living-room?

Now about the chimney. It is exposed in the living-room and the bricks show up to the wooden shelf. Would you have these bricks painted brick color and laid off with white to show them as bricks, or must I get rough ugly brick and leave it rough looking?

Would you wainscot the dining-room? If so, how deep, and would you have it plain or paneled? Would you have walls tinted, and smooth or rough effect?

Your house as described seems very attractive, and your ideas of placing the various pieces of furniture mentioned are good. The Gothic chair would look well placed near the entrance of your living-room, as this is more formal in character than the other pieces described. The mirror would be effective used over the mantel, as your letter indicates. The brass candlesticks should be used on the mantel of the living-room.

It is not necessary to leave the brick facing for the mantel in the rough. If you prefer the painted brick, we would suggest that you be influenced in the choice of color by the color used upon the walls. If—as we would advise—you cover these walls in a two-toned yellow tan paper, the brick should be painted in the same shade of yellow and given a perfectly flat finish by adding a great deal of turpentine to the last coat of paint.

We send you samples of the various materials which we recommend, but if you decide upon tinting your walls we heartily advise the rough-finished plaster in preference to the smooth. In your living-room, at least, the effect would be more satisfactory if you paper the walls. Use Oriental rugs if possible.

The wainscot in your dining-room could be made by using three-inch str ps of wood like the standing woodwork, placed at eighteen-inch intervals about the room, extending from the floor line and capped by the plate-rail. The rough plaster between the strips should be tinted in a shade of dull blue like the sample sent. The plate-rail should be set in line with the tops of doors and windows. The ceiling tint advised is a shade of *café-au-lait*, and this should drop to the plate-rail.

We send you a rough diagram showing the best assembling of the various pieces of furniture you describe, and some additions which we would advise.

Wall Papers

AS we have long been subscribers to HOUSE & GARDEN I wish to ask if you will kindly suggest papers for my parlor and dining-room. The house is a cottage and both of the mentioned rooms are about 15 x 15 in dimensions. They run north and south and each has a window looking west, and in the dining-room a large one looking north, while in the parlor are two with a southern exposure. The hall is papered in a green and tan figured paper, and the woodwork here as in the rooms is white enameled paint. The furniture in the parlor is all mahogany and in dining-room golden oak. The rooms open together with two doorways at which I use plain green curtains. The rug in the parlor is in shades of green, while a new one will have to be purchased for the dining-room. Will you suggest colors for this rug, and also material and colors for the curtains in dining-room, as well as papers for both rooms?

We are glad to send you the requested information together with samples of wall papers and drapery materials.

The two-tone tan paper is suggested for the parlor; the price of this is but 70 cents for 8 yards, and you will find it will make a delightful background for pictures while according well with the white enamel of your woodwork. For the over-draperies at the windows of this room we are sending a crinkled dull green silk which is 90 cents a yard, 30 in. in width.

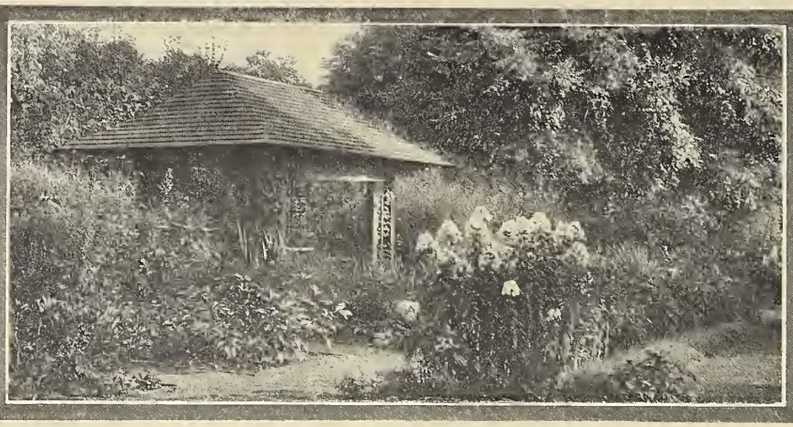
For the adjoining dining-room the tapestry paper is submitted. This shows tones of dull blue, olive green, and tan in effective mingling; the price is $1.50 for 8 yards. The ceiling should be tinted to the picture rail a soft shade of tan. I send you a small clipping showing the correct color for the ceiling. You may have your painter mix his tint to match this. He should dry out the sample and submit it to you to compare with this before he applies it to the ceiling, as the tint used for the ceiling is a very important part of any color scheme. For the window curtains we send two samples, either one of which will be attractive. As the room is of northern exposure the tan silk, which has a decidedly yellow tone, will perhaps be better this is 50 in. in width and cost $2 a yard.

Small, dull hand-made tiles make a charming facing for the fireplace and may be set in cement over unattractive brickwork

The blue silk is an excellent color if the room is bright enough to carry it. This is the same kind in quality as the dull green submitted. For the door curtains we would suggest the brown velour of which we send a sample. For the floor covering in this room a domestic rug is recommended. There is a good reproduction of an Oriental pattern in dull blue, green and tan tones; in size 9 by 12 a rug of this kind will cost you $50, but it has really a very long life.

White wainscoting seems particularly well adapted to the dining-room

Garden Suggestions and Queries



Edited By Gardner Teall

The Editor will be glad to answer in these columns queries that appear of general interest pertaining to individual problems connected with the garden and grounds. When a direct personal reply is desired, please enclose a self-addressed stamped envelope.

The New Year

HAPPY New Year! May the sunny months that follow Nature's resting-time find every garden-lover secure in the joys of a prolific flowering of all his hopes and all his plans!

Happy indeed will he be who, provident of the Seasons, pausing now to look out over Winter's blanket of snow, holds in his mind's eye the image of Yesterday's verdant cover and To-morrow's promise of fair flowers and fat vegetables. The poetry of anticipation and the prose of practicality must ever go hand in hand! So, while we are thinking of our June gardens let January find us making well considered plans for them. We must take down all the Christmas greens by Twelfth Night and burn them, if we would show reverence for the old-time traditions that are woven around this ceremony; yet, as we watch the smoke curling up from the now dry and crackling branches of holly and mistletoe and brittle greens, we will find it a sweet incense to remind us of the fragrance of coming months, in whose gardens and fields and woodlands fresh greenery will be grown. And when the busy housewife is sweeping up the dropping pine-needles, setting the house to rights after its holiday revelry, she will be sweeping up all of Yesterday's mistakes, if we believe in such things as they did in the good old medieval days when the Yule-log spluttered on the hearth, and King Wassail was monarch for twelve days.

So, having set the house to rights, we may sit down in comfort and quiet to plan out To-morrow, that from the seed of forethought fair gardens may blossom through the Seasons to come.

The garden in winter

January Plans

HAVING given thought to the planning of your next season's garden, and the things you may wish to plant in it, do not forget the important matter of anticipating its careful cultivation,—of the garden tools and implements which you will need in working it properly. There will be spades, hoes, lawn mowers, trowels, knives, sprayers, etc., to think of and to select from the best devices offered by progressive manufacturers. In gardening, like in everything else, good tools facilitate good workmanship and are great time-savers.

This is a good time to put greenhouse benches in shape, for nothing is more discouraging than to find them rotting away. Spray them with copper sulphate, and after that as often as necessary with your whitewash mixture.

Spraying is an important consideration for January and the month to come. Look well to it that you are not neglecting your fruit and shade trees, and that spring and summer do not come to find shrubbery and trees destroyed by scale and other pests. Let your "ounce of prevention" be dissolved into a good liquid and spray trees and bushes around your lawn and garden. At the same time do not forget that your neighbor's carelessness in such matters may negate everything you will have done, for no fence ever kept off insects, scale or blight. It will pay you to talk over the matter with Mr. Neighbor, for there is little doubt of his co-operation in your efforts to preserve the natural adornment of your yards, lawns and gardens.

Bordeaux mixture will prevent fungous diseases. It is compounded in the usual formula as follows:

Copper sulphate	6 lbs
Lime	4 lbs
Water	35-50 gals

The copper sulphate is dissolved in the water, milk of lime being added. It is better not to use Bordeaux mixture that has stood an unusually long time.

You will find other mixtures for the San José scale, and you cannot afford to neglect looking into any of these matters.

Apropos the matter of Fungicides and Insecticides it is interesting to note that at the last session of Congress a bill was introduced in both the Senate and House providing for the government control of the purity of fungicides and insecticides, in much the same manner as the purity of foods and drugs is now controlled. The passage of this bill, again introduced at the present Congress, would make special legislation on the matter by the separate states unnecessary.

Look well to your outbuildings, for a hammer in time saves nine kegs of nails.

Perhaps a glance out of your window over a strip of ground that now appears bleak and dreary to you will suggest that another January should find a tree, or a clump of shrubbery, with bright stems to give some sense of color and winter design to the landscape. It is just that difference between the monotony of snow-covered prairies and snow-blanketed woodlands that brings Nature to teach man some of her decorative arts.

A clump of Spireas will bring you both color and decorative form next winter—*Spiræa aricfolia*, which retains its dead flower clusters a long time, a pleasant

contrast of brown against the white snows, and *Spiræa Lindleyana*, whose bright colored stems also enliven the lines of the gray landscape.

Start the tuberous plants, Gloxinias and Begonias, now, if you would have them bloom early. Put them in flats, thickly together, and cover lightly with sandy earth. Avoid their rotting, and pot as soon as roots are developed.

If you would become more adept in the art of gardening study up some of the matters which you will have less time for when the busy days of spring arrive. It is well to post oneself on the matter of fertilizers and soils, since an understanding of such matters will foster gardening success.

Winter mice and rabbits may be girdling your trees. If so, bind strips of tar-paper around each tree thus attacked, high enough, however, to be above the probable snow-line.

These are the principal flowers whose seed may now be sown in the greenhouse: Pansy, Lobelia, Verbena, Marguerite, Carnation, Snapdragon, Petunia, Daisy, Forget-me-not, Wishbone plant, Impatiens, Salvia and Cannas.

If there is carting and wheeling to be done around a place now is a good time to do it, when the ground is hard and the turf will not be cut up by wheels to leave unsightly streaks across the summer lawn.

Plan early to order your Chrysanthemum cuttings so you will have good material for fall exhibition.

It is too early of course to make hotbeds outdoors throughout northern states, but one may sow almost all kinds of vegetable seeds indoors for early crops if care is taken and proper light, heat and ventilation provided.

See that the spots in your garden where you have had Campanula growing are carefully protected.

Send to your seedsmen for catalogues if you have not done so already, and give careful thought to the contents of these, not only in the matter of selecting the things you like and admire, but with forethought of planting effects.

Cape Bulbs

I OFTEN see the term "Cape bulbs" used by persons writing of indoor gardening. Will you kindly tell me just what is meant by the term?

Cape bulbs is the name given to that class of small bulbs which are found at the Cape of Good Hope and thereabouts, such

Oxalis ceruna, one of the best known Cape bulbs, easy to grow and very decorative

as the Freesias, Ixia, Sparaxis, Oxalis, Babiana, and Tritonia (the Montbretia, of the gardener). Oxalis and Freesias are easily grown, but the Ixia and Sparaxis are rarely met with, though they are well worth the trouble it takes to bring them to successful flowering. This plant is much better known in Europe. Cape bulbs are grown extensively at the Channel Islands, where they thrive remarkably well. Freesias are seldom grown in Holland, but the trade in them is growing in the Bermuda Islands, while California leads in the United States. Ixias have been raised successfully for commerce near Boston, and of course they are grown for the trade in California. All the Cape bulbs flourish in the Azores, where some of the most beautiful gardens in the world are to be found.

Cutting Back Rubber Plants

I HAVE only a small space by a sunny window in which I keep my plants, and lately my Rubber plant has grown too tall to look well or to fit into the limited space I have for it conveniently. Is there any way of cutting it back safely? I have tried to exchange it for a smaller one, but we have no florist in our village, and no one cares to take so large a plant.

The decorative qualities of stems and branches add to winter effects

The Rubber Plant (*Ficus elastica*) may be reduced safely by cutting the stem down to about a foot and a half from the soil of the pot. New shoots will soon appear, to transform the stub into a rounded, shapely head.

Neglected House-Plants

WHILE we were away from the city on a trip abroad, the people to whom we let our house either neglected to care for our plants properly or did not understand them. Consequently, the tips of the ferns and palms have turned brown. What should be done towards restoring them?

The best thing to do is to send them to your florist, for it may need months of careful attention to bring them back to their original vigor.

Fertilizing House-Plants

I AM told that house-plants require manurial stimulant. Will you please advise me about this matter?

Manures may be used in mixing soils for potting; however, they should be used most sparingly as they are too strong to be used in quantities within the confines of the flower-pot, and when added in too great a quantity will burn instead of nourish the tender plant-roots.

For Sunless Windows

WHAT plants thrive in windows that do not receive much sun? One of my rooms which I am planning to use as an upstairs sitting-room has a window in which I wish to place such plants.

Geraniums, all fibrous-rooted Begonias, and Fuchsias are some of the better known plants that thrive with less sunlight than some others.

Century Plants

IS it true that the century plant blooms but once in a hundred years? I have been told this is not true, and as I live in the country I nave no access to any library, so cannot look up the information myself.

No, this plant, the *Agave Americana*, a desert habitant, seldom reaches bloom at all under cultivation because sufficient room is not allowed for its potting. The roots need plenty of room and nourishment—plant food and water, often denied them because it is known they are native to arid countries and plant lovers suppose they are to be treated like prisoners, forgetting that they are not there exposed to desiccated hot air. Under good treatment these Agaves have been known to blossom within twenty-five years. As soon as its seeds mature it dies, but the plant may be perpetuated by the suckers forming at the base of the parent plant.

Be sure that the sleeping-porch connects with a warm dressing-room

Building a Sleeping-porch

BY T. E. WHITTLESEY

Photographs by Jessie Tarbox Beals and others

SLEEPING outdoors seems to have progressed well beyond the fad stage. The practice appears to require but a single trial to convince even the most skeptical that "night air," that *bete noir* of our grandmothers, is in reality a pretty fine thing to get into one's lungs in large quantities. Why is it that a camping trip has upon most of us the effect of setting us up on our feet again with a new joy in living? Is it the diet of soda-raised "sinkers," poor coffee and half-fried bacon that works the miracle, or is it, perhaps, the sleeping outdoors in pure invigorating air?

Outdoor sleeping has come to stay, so let us recognize the fact and build our houses accordingly. The thing has taken us unawares; we are forced to drag a cot out upon the fire-escape, or rig up a bed-annex so that we can sleep with our heads at least outdoors, shutting the window-sash down on our necks. These makeshifts are perfectly good, as such, but when we come to build our new house there is a chance to have a sleeping-porch that will be to the old makeshift what a cot and a wooden floor are to camping.

In the first place the porch should open from a bedroom or dressing-room, so that the sleeper may have a conveniently near and warm place in which to dress and undress. A comfortable adjacent dressing-room robs the sleeping-porch of its one sting.

Most of those who sleep outdoors seem to feel the need at times for a shelter of some sort against the wind, and even the most enthusiastic advocate prefers to have the rain and snow and hail kept off his bed. A roof for the porch seems advisable, therefore, and a set of windows pivoted at top and bottom to revolve sideways. This form of window will obstruct little or all air as desired, provided some device is attached by which the sash may be clamped firmly in any position. An arrangement of pulleys and cords, the latter brought to the side of the bed, makes the operating of the sash a simple and easy matter without leaving the shelter of the warm covers.

Insect screens may replace the sash in summer provided these are needed, and a canvas drop curtain will shut out the driving rain.

Whether the sleeping-porch is to be built directly over the lower porch, or as a balcony, or as an open corner under the main roof depends entirely upon the conditions of each case—architecture, prevailing winds, etc. The point is that when one is building, the sleeping-porch should not be overlooked, either for immediate use or as a desirable feature of the home in the future.

Raising the canvas panels makes of this summer home an outdoor sleeping-room

The vertically pivoted sash screens the bed from the wind

A whole corner of the second floor may be left open for outdoor sleeping

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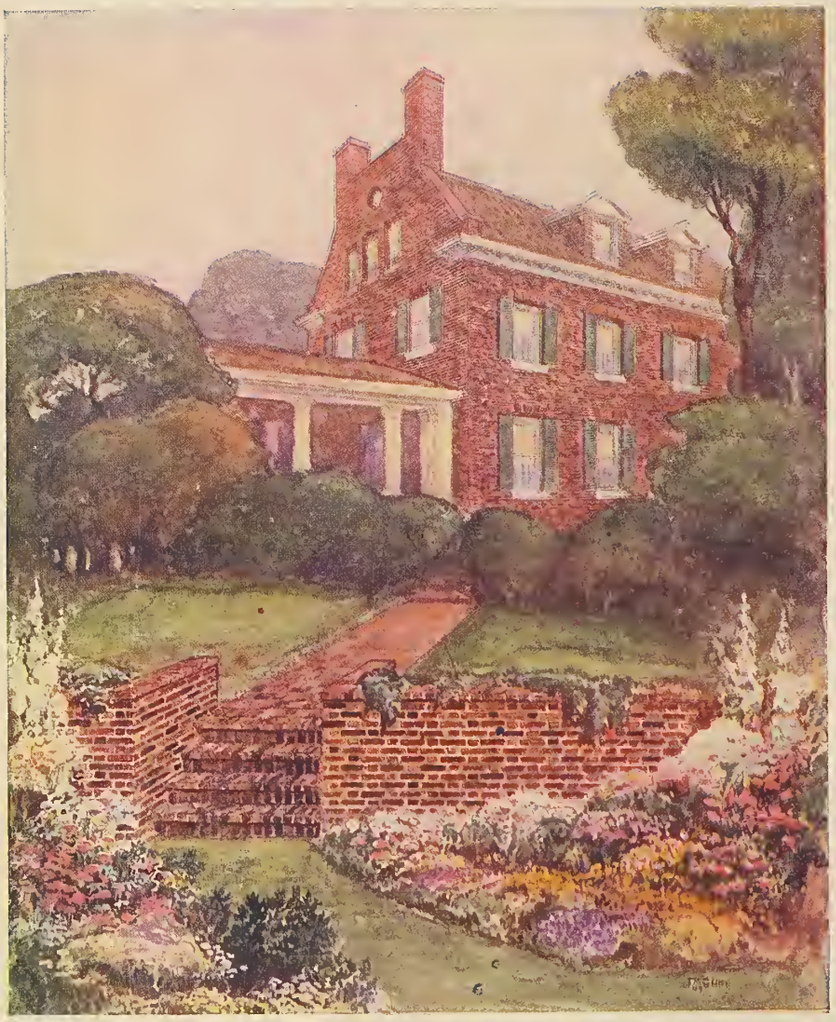

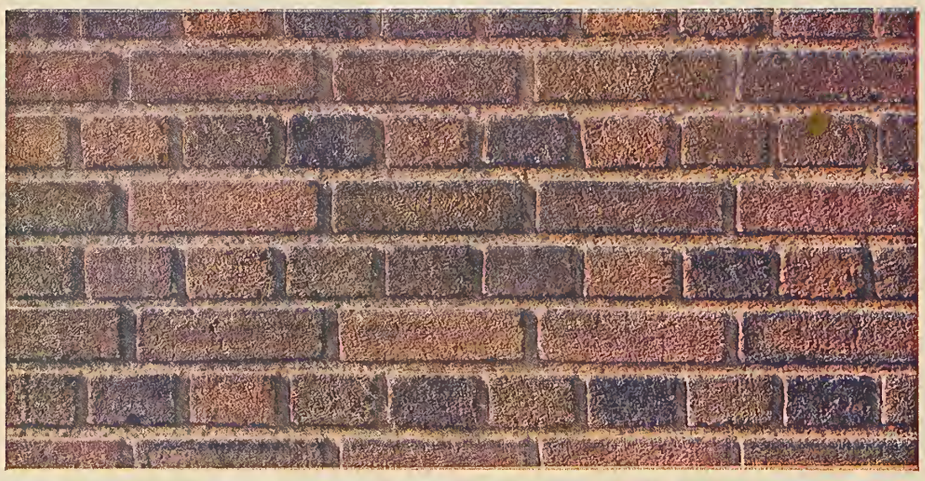

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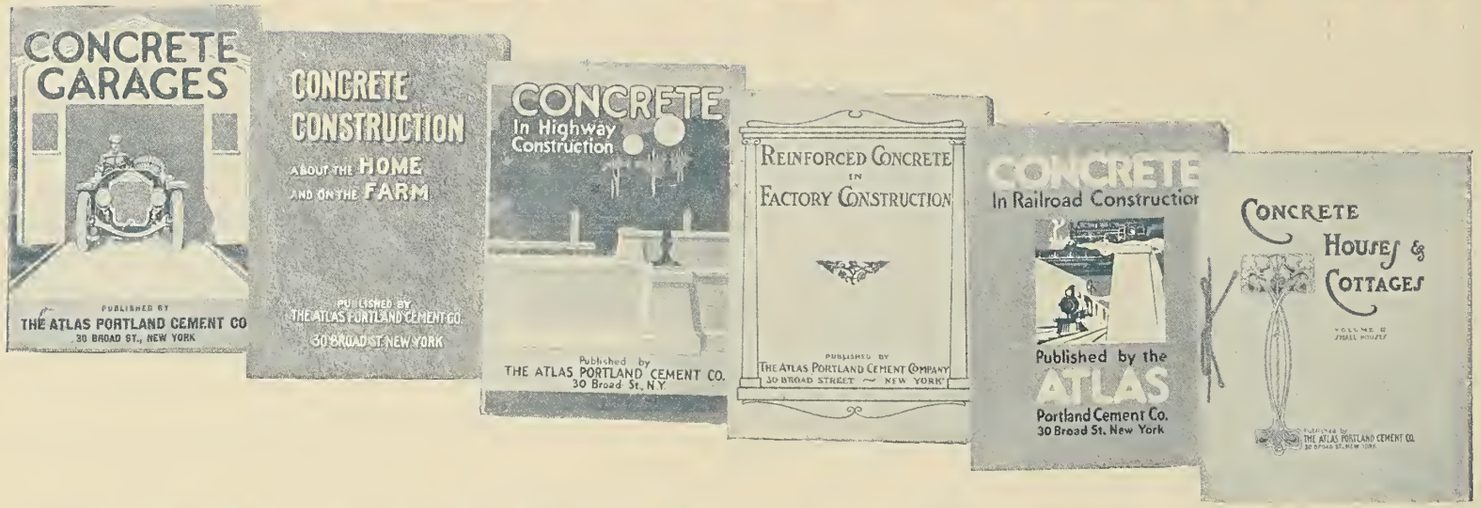

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THE LIVING-ROOM OF "UPWEY," MR. ERNEST E. CALKINS' HOME AT ELMSFORD, N. Y.

On account of the steeply sloping site the front entrance is at the end of the gallery-like hall. The living-room is fourteen feet high

(See page 60)

House & Garden

VOLUME XVII February, 1910 NUMBER 2

A modern Dutch Colonial home at Colonia, N. J., George A. Nichols, architect

The Dutch Colonial Type of House

BY AYMAR EMBURY, II.

Photographs by the author and others

[The problem of choosing an architectural style for the American country or suburban home is one of the most puzzling that confronts the home-builder. In order to bring about a better understanding of the more common types and with the idea of clarifying, as far as possible, this whole matter, we have asked a number of prominent architects to present each the case for one particular style. In the December issue Mr. Frank E. Wallis, the well known authority on Colonial architecture, told why a house of that type is the only one to build. Mr. Allen W. Jackson presented in the January issue the case for the Half-timber house. In the present article Mr. Embury adds his convincing argument for the picturesque Dutch Colonial. A number of other styles will be explained and illustrated in future issues—modern English and German types of plaster houses, Italian adaptations, the Patio type and probably one or two others. The Editors will gladly do all in their power to answer any questions regarding style, details or construction.]

BEFORE going into the subject of the merits of Dutch architecture it may be well to define the meaning of the term as it is commonly used. It refers not to the architecture of Holland, but to the style which was built up by the Dutch Colonists and which was developed not only by them but by the French Huguenots and the English who later settled amongst them. The houses are entirely different from those of Holland in material, in mass and in detail. Here the houses are built of stone or of stone in combination with plaster or clapboards, but brick was very sparingly employed, except for the chimneys and the enormous baking-ovens. In Holland, on the contrary, the architecture was one almost entirely of brick; stone was about as common as diamonds are here, and came in about the same sized pieces. The most characteristic feature of our Colonial Dutch houses was the roof, and this again was of a new type. Here either a long low sloping roof was employed or the gambrel type, so beautifully handled that the terms "Dutch" and "gambrel" are synonymous.

The origin of this roof has been long a subject for dispute. It is purely an American development, without any European precedent, and its use must have arisen from some condition peculiar to this country. I believe this is to be found in the fact that two-story houses in Colonial days were heavily taxed, while one-story houses went free. The early designers therefore endeavored to evade the law by building a one-story house of two stories, and in order to get the rooms in the second story as large as possible, the roof was given a wider overhang and sloped very steeply. But, since continuing the steep roof slopes on either side of the house up to their intersection would be excessively high, giving the house as seen from the end the shape of a stingy piece of pie, after the builders had run it up high enough to include the second story they covered over the intermediate spaces with as flat a roof as possible. The wide overhangs, besides giving more space in the second floor, had another valid reason.

The Mitchell cottage, East Orange, N. J., has a gambrel roof of pleasing proportions. Joy Wheeler Dow was the architect

A Pasadena, Cal., home—the Spier house—shows the freedom of Dutch Colonial lines. Myron Hunt and Elmer Grey, architects

The gable ends were usually built of stone, since they were difficult to protect from the weather, but the front and rear walls, covered by the wide roof, could be covered with plaster much more cheaply and with a maximum of effect. Yet while stone for the ends and plaster for the front and rear was the usual method of construction, it was by no means the only one. Any or all of the materials above mentioned were used in the same house, and it is by no means uncommon to see four or even five in combination even in a very small building; the charm of the free design which was the inevitable result cannot be approached in any more stereotyped architecture.

The moldings and details employed were as individual as the design. We find many of the porch columns, for example, hexagonal or octagonal in shape and crowned with capitals the moldings of which are suggestive of both Greek and Gothic origin. Other houses have the same varieties of Renaissance columns which were used by the designers of the New England and Southern Colonial. There was nothing forced, nothing strained anywhere apparent, and the result was the creation of an independent architectural style; and the only one which has been developed in the United States.

Mr. Jackson in his article on half-timber houses has well stated that the proper style to employ is that developed by the race which uses it, and he believes that we should therefore design our work following the English traditions. Yet the proportion of the American people whose ancestry is English is a comparatively small one, and English half-timber architecture is distinctly an importation in this country and not a development. Mr. Wallis, like Mr. Jackson, also insists that the native style is the one which absolutely must be employed. I thoroughly agree with both of them, and, if we are all three right, the style to use is Dutch or nothing.

Colonial architecture is formal while the half-timber work is informal; both have advantages, the former in its dignity, and the latter in its flexibility. The Dutch work has the advantages of both without the disadvantages of either. If the symmetry of the Colonial house is disturbed its agreeable qualities are lost, while the half-timber house executed symmetrically becomes dry and tiresome in the extreme. A house can be executed in any way you please in the Dutch style. The central mass of the house may be flanked with wings of equal size and similar fenestration, or the house may ramble about, following the slopes of the ground and avoiding big trees without any loss of charm. The first-story rooms can be high, square and simple, or they can be low and broken with deep-set windows, should that be the type desired, and the "company" rooms can be of one kind and the living-rooms of the other; and, best of all, both can be combined into a single and harmonious whole without a discordant note.

Dutch architecture even in its most conventional form is

The Board house at Paramus, N. J., is one of the finest old Dutch examples that remains to inspire modern work

The old tavern at Tappan, N. Y., in which Major Andre was confined the night before his execution

extremely individual. Its designers have left us so many precedents that in working in that style you never have the least feeling that you must go look it up in a book and find out if it was ever done in that way before. You are very sure that if it was never done, the only reason was because the Dutch did not happen to think of it.

Mr. Wallis has said that the influence of Dutch Colonial compared with that of the architectures of the north and south of it has been negligible. This is to some extent true, and it has been a matter of never-ending surprise to me that the style is so little known or appreciated even here in New York, within twenty miles of which we can find the most exquisite small houses that were ever built. It is true that we have no "mansions," nor are there any "villas," but we have *homes*. If country life is worth anything at all it is because the necessity for dress and convention is minimized, and the enjoyment of country life depends upon outdoor sports. Certainly nothing could be more ridiculous than golf clothes in an "Adam room."

A recently remodeled Long Island farmhouse, the architectural merit of which has been sustained through a century and a half

I grant that the style has its limitations; there never was one that hadn't, but what I do most firmly believe is that there is no other architecture so perfectly adapted to American conditions, so plastic in permitting adjustments of exterior to plan, and so absolutely suited, aside from any sentimental reason, to small house architecture as is the Dutch Colonial. A small house cannot be built two stories high before the roof starts and not be too high for its width. It is essential that the walls of a house should be wider than their height and this can only be attained in the small house by bringing the roof low. The Dutch, two hundred years ago, for purely practical reasons, discovered that the gambrel roof was the solution of the problem of getting the most room in a low house; their solution is still correct.

The architecture of the first settlers in a country is apt to be the most desirable to employ. Whether this is because of a reflex action of sentiment, or whether it is that the old houses were built from materials taken from the earth and fields around them—and there is something peculiarly fitting in the use of local materials—cannot be easily known. The fact remains that the Dutch is the only indigenous architecture and certainly the most suitable. With our complex modern conditions, the vast increase in the wealth, not only of the very rich, but also of the well-to-do, conditions in this country have somewhat changed. Our race is no longer English, but cosmopolitan; its dominant strain is English in political ideas only, our morals are of home growth, our educational system has been adapted from the German, our art is governed by French ideals. We are cosmopolitan, and yet everything we have taken from the old sources has been adapted and adjusted to our needs until it has become stamped with our ideals. We are reaching out and grasping for everything that is good, coining the world's gold to our use. That is precisely what was done in house-building two hundred years ago by the settlers in New York and New Jersey who developed Dutch architecture. We all agree that a dwelling house should look like a dwelling house and not like a museum or a castle; the only point of disagreement is as to what kind of a looking thing a dwelling house is. In his effort to sustain the domestic reputation of the Colonial style Mr. Wallis has stated that the Greeks, whose architecture was a kind of "missing link" ancestor of Colonial, invented the nightshirt; can he deny that the Dutch discovered pajamas? Even more than Colonial, the Dutch has that quality of intimacy which is at the root of successful work; and it has a

In all probability the gambrel roof was developed by the attempt to build story-and-a-half houses to escape the tax on two-story ones

The Barber house, Englewood, N. J.,—designed by Mr. Embury—illustrates the great freedom that may well be given the old motives

A screen wall of brick, wood and windows between the stone piers, sheltered by the overhang suggests the Dutch plaster wall similarly protected. Another of Mr. Embury's houses

Where a piazza was introduced the overhang was extended and supported by slender wooden columns, square, octagonal or round. The Westervelt homestead, Creskill, 1807

virility and sturdiness which makes it most suitable for modern work. English half-timber is frankly an importation, often charming, it is true, but as unsuitable to the United States as are thatched roofs. Colonial was the last cry of an age when politeness was made a god, and is mannered and conscious. The Dutch was sincere, expressive and vital; strong and pleasing in mass, refined in detail and beautifully fit, in both form and color, to the American landscape.

Boundary Lines and Boundary Plantings

THE REASON WHY EVEN THE SMALLEST HOME PLOT OF GROUND SHOULD HAVE ITS FENCE OR HEDGE—PRACTICAL SUGGESTIONS FOR PLANTING THIS BOUNDARY

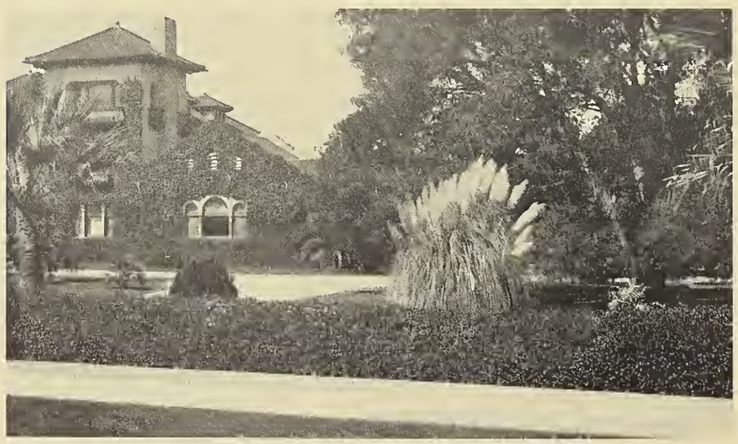
BY GRACE TABOR

Photographs by Eldred Bates and others

[*The fifth of a series of articles by Miss Tabor on the subject of landscape gardening as applied to the American home of moderate size, preceding titles being "Utilizing Natural Features," "Getting Into a Place," "Formal or Informal Gardens," and "Screening, Revealing and Emphasizing Objects or Views." Any questions relating to further details and planting information will gladly be answered.*]

A BOUNDARY is "a visible mark indicating the limit"—those are the exact words—hence there can be no greater anomaly than an "invisible boundary." And happily we are outgrowing the affectation that led us, a decade or so ago, to such violation of good sense as the total elimination of hedges, fences and all other "visible" evidences of limits.

It must have been affectation pure and simple, for there is absolutely nothing in human experience nor human instinct which prompts such action. Rather indeed, do these urge an opposite course. A little bit of the earth with a fence around it is the honest demand of human nature, common to all but the anarchists. These want the fences down to be sure—or they say they do—but is it so the other fellow may walk *in*, or because they themselves want to walk *out*?



A bit of ground with a hedge or fence around it is but the rational honest demand of human nature

The sacrifice of boundaries in suburban communities has usually been made, I think, under a doubly mistaken idea—the idea that an effect of spaciousness is thus gained, and that this particular effect is the great *desideratum* to which all else should be willingly sacrificed.

As a matter of fact spaciousness is of small consequence, alone and by itself. When it results naturally from conditions which have been carefully taken advantage of in the layout of a garden, when the greatest attention to economy of space has produced it or emphasized it, well and good. In other words, when it actually exists, where there actually is "space" to take advantage of and to emphasize, then and only then is it suitably made the motif of a place. Efforts to produce it under other circumstances are misguided, none more so than the unhappy obliteration of boundaries to that end.

The position of a dwelling and its relation to those about it show plainly where the boundaries of the land with which it is furnished lie, and the observer is never deceived by lack of definite markings. All the lovely seclusion and privacy which good taste demands for the home, and which may be the attribute of the tiniest scrap of a dooryard if it is well planned, are thus sacrificed in vain; only garish publicity and barrenness, or vulgar ostentation result—never the delusion of space fondly and commonly hoped for.

Boundaries should therefore be marked—always; not simply defined as property limits but marked defensively—aggressively if you will—as a beginning to the gradual process of home-building which is to go on within them. They separate the home from

An ingenious pergola-like boundary that is a well defined boundary without shutting out a glimpse of the garden

The old idea that no boundaries make for spaciousness is exploded. Spaciousness is not gained and all privacy is lost

the outside world and suggest its aspect of refuge and snug retreat, of safe and pleasant harbor. And the smaller the place and more thickly settled the neighborhood, the more imperative the need for this defensive setting apart, the greater the gain from this resolute planting out of the big world and planting in of the little, individual one.

Suburban plots are usually small and cramped, to be sure, obviously too small for a marginal planting of trees and shrubs, but no matter how tiny the place may be there is some suitable enclosure for it. It is simply a question of finding out what that may be.

Seldom is anything better for the small place than a hedge. Whether it shall be evergreen or deciduous depends upon the amount which is appropriated for its cost—have the former if possible—and whether it shall be formally clipped or left to grow in natural, informal abandon depends upon its owner's taste partly, and partly upon the style of the house and the place generally.

Among evergreens the hemlock spruce (*Tsuga Canadensis*) stands quite apart to my mind—pre-eminently the loveliest and best in all respects. No amount of shearing destroys the feathery grace of its young growth, its deep rich color is always fine winter and summer, it grows rapidly, is perfectly hardy, not difficult to transplant and not particular about soil, providing there is a fairly constant supply of moisture down below the surface.

Plants up to a foot high are listed at $15 per hundred; two feet high they cost $40. They may go into the ground two feet apart but eighteen inches is better, insuring thicker growth much earlier of course. Compared to this, privet at $3 per hundred or even at $5, which is the price of strong, bushy plants from which a five-foot hedge may be produced in three years time in rich soil, is decidedly cheap. This also may be trimmed as much as one wishes and into any shape. The best form for any hedge is the inverted wedge shape, altogether too rarely seen. This allows the lower branches to get their full share of sunlight and air and it also catches less snow during winter and saves the strain and breaking down common after ice storms and blizzards.

Set privet plants nine inches apart and cut down uniformly to within six inches of the ground at time of planting, or even closer if the plants are not stalky. Privet branches in whorls of three wherever it is cut; in order to secure a good strong base these branchings ought to be very close to the ground, and though it seems a pity to sacrifice so much on the height of the plants, a season's growth more than makes it up—and then the hedge is well begun.

The English hawthorn (*Cratægus oxyacantha*), well beloved and famous, makes a charming flowery hedge either trimmed or untrimmed, if the pruning is done at the right season. In common with other spring-flowering plants its bloom is borne on wood formed the previous season. Never prune it later therefore than the middle of summer—say the first of August—else you will destroy the next season's flowering wood. It is generally best to confine the trimming of all this class of shrubs to the fortnight immediately following their blooming period, unless the plant bears ornamental fruits. Even then these will have set and may be spared, enough of them at least to make a brave winter show.

Berberis aquifolium and *Berberis Thunbergii*, though seldom used for hedges, are splendidly adapted to them, whether trimmed or not. The holly-like foliage of the former colors splendidly and persists late in the fall while the latter forms a dense broad mass of twiggy growth so well protected by its tiny thorns that nothing will molest it.

Nature offers the best possible model for boundary planting on a larger scale. Observe her treatment of any irresponsible watercourse whence some truant brooklet loiters and hurries alternately on its way; or of an old roadside where she is left undisturbed, or along an old fence or roughly piled stone wall.

Look first at the form—the general shape—of the mass of wild growth. Its irregular skyline will impress eyes that are opened to

It is only on the larger estates that one can have boundaries of trees, shrubs and flower borders in combination

Back in the days of our Colonial ancestors they understood the value of the picket fence or hedge

A low hedge pushes through this Vancouver, B. C., front fence, making a secure protection and an attractive boundary

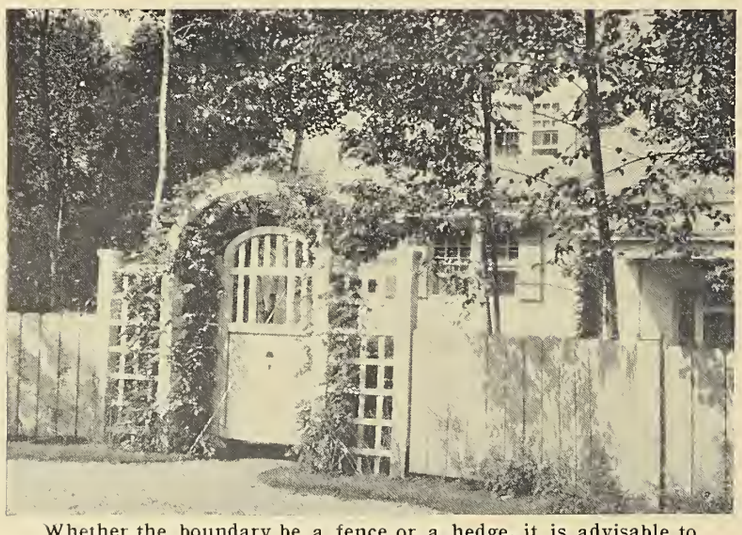
it at once, likewise its varying width upon the ground—here thick and dense, there sparse and thin. This irregularity and the varying form are more important than its color or than the variety of plants composing it, for the picturesque charm which distinguishes it is almost entirely owing to these.

Then note that the direction of such a boundary changes, even though it may follow a generally straight line, and that the corners are never sharply turned. And finally, record carefully the fact that Nature uses lavishly one or two kinds of plant and allows only a fugitive specimen here and there of others, half hidden among them.

A solitary umbel of flaming bunchberry which once caught my eye from beneath a mass of sumach and elder along a meadow boundary near a patch of old woods, always recurs to me in this connection. Who but Nature—unless possibly a Japanese—ever composed with such cunning simplicity? Fifty bunchberries would have made more show—but how much less of an impression!

Even where the space permits a border planting varying from ten to twenty feet in width, it is better to limit the varieties to three or four, rather than risk the jumbled and crowded effect which results from the use of too many. Trees may accent a point here and there but they are not necessary, for with four kinds of shrubs, properly selected, a sufficiently varied skyline is assured without them.

The dwarf Juneberry or shadbush (*Amelanchier Botryapium*), which reaches 20 feet in height, the kinnikinic or silky dogwood (*Cornus sericea*), growing to 10 feet, the elderberry (*Sambucus Canadensis*), attaining anything from 5 to 12, and Thunberg's barberry (*Berberis Thunbergii*), which stops at 4 feet, are a quartet from which any desired combination may be worked out by careful planning.



Whether the boundary be a fence or a hedge, it is advisable to mark the entrance with a wooden gateway or arbor

Reedy grasses help in reproducing Nature's careless liberality if they are used moderately and in her way. The great reed (*Arundo donax*), which towers to 20 feet and sometimes higher, the pampas grass (*Gynerium argenteum*) or the native spike grass (*Uniola latifolia*), the former reaching 10 feet, the latter 4, are all hardy and good though the latter is undoubtedly best for use with shrubs where a natural effect is sought. The others are too dominating and overtop a modest border with their rank, tropical luxuriance.

Within the outer boundaries of a place there are numerous lesser "limits" to be marked; the service or kitchen yard needs its screen, the vegetable garden its protection, the chickens their restriction, and perhaps a rose or flower garden its shelter and seclusion.

Each of these inner boundaries should be made the motif for some particularly individual treatment, thus combining utility and beauty. A high service yard lattice is the best possible place for those fruit trees which in English and European gardens are trained on walls.

Arbors and trellises should always mark a boundary instead of being set aimlessly down without any reason for being there. In fact if there is any one thing about garden design that I believe needs emphasizing more than another it is this:—nothing should ever be built or planted without a reason; a *reason*, mind—not an excuse.

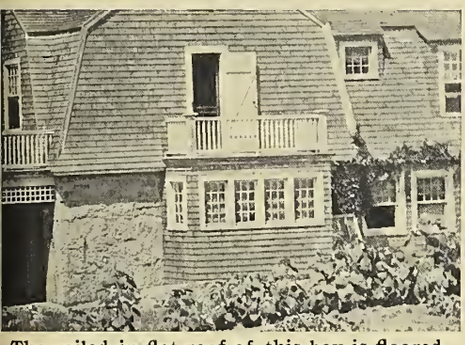
Finally, never leave a fence or wall or other boundary unplanted. Whether the defense which you have adopted is a brick wall or chicken wire strung on gas pipe, be not satisfied with it and it alone. Give it clothing; if there is only room for a hedge inside it or for vines to clamber through or over it, have the hedge or the vines. Let the living green frame the lawn and furnish the background for flowers or whatever may be introduced.

Not a single summer need go by with such a fence or wall barren, for sweet peas or morning glories—get the Imperial Japanese variety—will cover it in no time, while the slower,hardy stuff is making growth. The evergreen honeysuckles are, of all fence-climbers the most satisfactory, to me at least; not only because they are so hardy, and practically evergreen, but because they blossom freely and fill the air with such delightful fragrance. Planted at ten-foot intervals and "layered" for a couple of years—a long branch from each plant laid down along the fence to root, covered lightly at the joints with earth—they form a growth in a very short time so dense and compact that it is virtually a hedge.

An upper bay should usually have some apparent support, even if only brackets

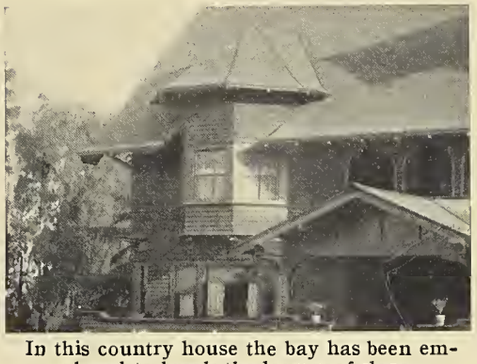
Modern English plaster houses are frequently seen with this curious flat-roofed type

The home of Mr. J. W. Dow, architect, has this light and graceful bay over the entrance



The railed-in flat roof of this bay is floored and used for outdoor sleeping

The half-brick jog back before the angle sides start lends character to this bay



In this country house the bay has been employed to break the long roof slope

Bay-windows seem always to fit well into a half-timber house

An unusual two-story bay on a rather narrow gable end

This five-window cement bay must make an attractive end feature for its room

NINE TYPES OF BAY-WINDOWS

The square front portion of the house is the remodeled stable; the service wing at the rear is new, built of long, flat Germantown stone. Messrs. Mellor & Meigs were the architects

A House Built from a Stable

BY JARED STUYVESANT

ONE hears of all sorts of astonishing building transformations these days, remodeling old barns into modern country homes among them, and one remarkable New Jersey achievement records even the rehabilitation of an abandoned poultry house into a home for an adventurous couple. The striking fact that immediately presents itself to the cold-blooded practical man is that in nearly all of these home-building efforts there has been no real reason why the builder should have made use of the existing structure. It will usually be found upon pointed inquiry that the old building, or what was left of it, supplied no materials for the new home that could not have been bought cheaper in the open market and in such condition as to have bestowed upon the new home a greater measure of self-respect. Such pleasure and reward as the prestidigitator reaps from his skill is apparently the thing that is sought for by the stunt-producing home-builder. The fact that the resulting house lacks a bathroom and that the main stairway leads unabashed into the only guest-chamber, worries its owner not at all. That the house has been painfully evolved from two piano-boxes with the aid of an oyster-knife is the essential fact in the mind of the proud amateur architect.

The original stable was not an architectural gem. Notice how the two front openings have been retained in the house as altered

In consideration of these things, therefore, let me explain without more ado that the country home herewith illustrated is not of this type at all. There were two excellent reasons why the old stable should have been used as the basis of the charming stone house that has been built, and either of these reasons alone would have been entirely sufficient in itself. The first reason was that the owner of the stable—and of the main house on the property—wanted to provide a nearby home for one of his married children. The plot of ground occupied by the old stable seemed the most desirable spot on the comparatively restricted Germantown estate and, moreover, the stable, as such, had outlived its usefulness—a glance at the illustration will serve to show that it never was distinguished for its architectural beauty.

And the second reason for accepting it as a working basis for the new home was that the thick stone walls could be used almost intact for the main portion of the new structure. The sturdy joists that had been set close enough together to support the

weight in the hay-loft were also found to be in excellent condition. In the living-room, as the illustration shows, these were not covered up by lath and plaster ceiling, but were stained dark to match the new woodwork of chimney breast, wainscoting and the trim around the windows and doors.

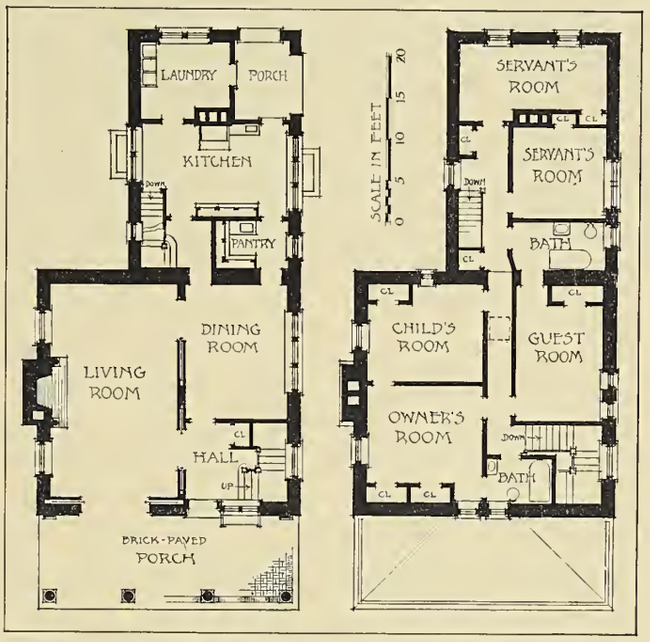
In the dining-room, too, the joists were left uncovered, but in this room they and the new woodwork were painted white. A triple casement window affords an abundance of sunlight from the east for this room, which is made still more cheerful in its effect by the white woodwork and ceiling beams.

The floor plans indicate very clearly just how much of the walls the old stable supplied. The square front portion marks the extent of the old structure, which, of course, was not entirely sufficient for the family's needs. The wing that was added at the rear is of stone too, but it will be noticed from the picture at the bottom of this page that it is somewhat different in texture. This new work, as will be seen, is built of the flat Germantown stone that has been so effectively used throughout that part of the country in recent years.

It is particularly interesting to see how the architects have permanently recorded the humble origin of the house rather than follow the obvious alternative of covering up the fact once for all. The two great openings at the front of the first story have been very cleverly incorporated into the design, one being filled by the front door and a window and terrace bench seat, the other opening having been fitted with heavy sliding glazed doors to make bright the living-room. In the summer time these doors are pushed back into their pockets and the opening protected by a sliding mahogany fly screen.

Still another detail indicating a recognition of the building's former use is the conventionalized horse's head upon the upper panel of the front door. From its mouth dangles a pivoted horseshoe that serves as a knocker. Three long hand-wrought hinges of black iron extend nearly across the white-painted massive door.

At the front end of the living-room the nine-foot opening is provided with glazed sliding doors which give place to sliding screens in summer



The square front area is the original stable, the service wing and brick paved terrace being new work. The stable having had no cellar, the heating plant is located under the kitchen

The floor plans indicate the skilful planning which is always called into play by the necessity for dividing up a given enclosure. A living-room, fifteen by twenty-six feet in size; a dining-room, thirteen by sixteen; and the stair hall with its coat closet, have been planned to occupy the old square stone enclosure without wasting a square foot of space. Beyond, opening from the dining-room, lies the service portion of the house, well isolated, and having its own stairway to the servants' bedrooms and to the cellar which extends under the new portion at a depth sufficient for the heating plant and comfortable head-room. Under the old portion of the building, there having been no cellar, the excavation extends to a depth of but four feet below the bottom of the first-floor joists. This space is ventilated by openings through the stone walls and lighted, as well as need be for its use as storage space, by two windows.

The result of the low level of the main floor is the charmingly hospitable effect gained by the low brick terrace—just a step above the lawn. One often hears the practical builder condemn the architect's habit of setting the house down low into the ground, decrying the resulting lack of light in the cellar or the wasted money used in building areaways for the windows. Without going into the unquestioned benefit to the architectural appearance gained by having the house as low as possible, the actual cash saving on a wall for the terrace or a railing for the porch—made necessary if these levels were higher—would surely pay for the area brickwork.

On the second floor the sub-division of the old hay-loft space has been just as economically arranged as the first floor. The owner's bath fitted in amazingly well over the small entrance hall, taking its light from one of the symmetrical pair of windows in the front gable end. Fitting into the slope of the roof, the closets in the owner's room and in the child's room occupy space that would otherwise be deficient in head-room.

On this side of the original structure the chimney that serves the living-room fireplace has been added

In the living-room of Mr. Reginald De Koven in Washington, the low bookshelves circle the room

Taking Care of the Books

ALL TYPES OF BOOKCASES FOR THE LIBRARY, LIVING-ROOM, DEN AND STUDY—BUILT-IN SHELVES, WITH DOORS AND WITHOUT, PORTABLE CASES AND OLD SECRETARIES

BY RUSSELL FISHER

Photographs by C. H. Claudy, Waldon Fawcett and others

THE saying, "Show me a man's books and I'll tell you what manner of man he is," is an old one, and well worn by much use. Its present-day descendant is, "Show me a man's library and I'll tell you whether he is a true book-lover or a mere *poseur*." A mere array of titles on a bookshelf means absolutely nothing in these days of material prosperity and cheap printing; the marks of wear and the manner in which the volumes are cared for are the true indices that bear a message. Most of us have too high a regard for the purely decorative value of well filled bookshelves and not enough reverence for the true worth of the contents between the covers. "Books *furnish* a room so well," we say, and lay them in by the yard. How much easier it would be to judge a man's taste for literature if books in themselves were repellent in appearance—and how less attractive would be our libraries and living-rooms in their absence. But this is to be an article on bookcases, not a dissertation on the ethics of library-making. Let me say just one thing more, and I will have done with my preaching: Have about you only the books that you really want and that truly represent your tastes; success in arranging them in an attractive manner does not depend on the number of volumes. To satisfy yourself that this theorem is true look at the first illustration at the top of the next page. The combination of fireplace, seat, window and built-in bookshelves, small though the latter are, conveys the impression that here dwells one who loves books—loves them to read, not for the sake of their decorative quality as mere furniture. A large library, completely walled in by crowded shelves, may convey the impression that the dweller therein *owns* quantities

If bookcases are built in, they should match the standing woodwork rather than the furniture

This combination of fireplace, seat, window and bookshelves, designed by Lawrence Buck, architect, is very near the ideal

The adjustable shelves and leather protecting flaps go far towards making glazed doors unnecessary

of books, but does it proclaim the true book-lover any more insistently? Which of the two impressions would you prefer to have your own library or fire-corner convey? Let us admit, then, that the actual quantity of books is a negligible factor in the success of our efforts to make those we have appear to best advantage.

With that question out of the way there are several other factors that will have more weight in determining the strength of the impression our library will convey to its visitors—accessibility of the books, shelf-room that is too small for the volumes in hand rather than too large, and the matter of protection.

As to the first factor of these three, have your books within easy reach. Nothing is more conducive to making the most of odd moments for reading than immediate accessibility. I would almost rather have some of my books in the attic than stacked away on shelves up just under the ceiling. Imagine, if you can, getting down a book from one of the two shelves over the doorway in the library illustrated at the bottom of this page. You wouldn't get it down, you would select another book nearer at hand. Do not run the shelves all the way up; have longer cases and make them lower. A top wide shelf about five feet above the floor is wonderfully useful.

Not nearly so inconvenient but at least somewhat unhandy is the common practice of having bookshelves extend down to an inch above the floor. There is a very easy way around this: have the lower foot or two filled by cupboards or drawers. You undoubtedly have a lot of drawings, photographs, maps and such unwieldy things that need a known resting place. Lockers with doors hinged at the bottom and held fast when partly open by chains make wonderfully convenient receptacles for such things.

Then there is the choice between open shelves and glazed doors to be considered in this matter of accessibility. Open shelves have two advantages: they are cheap and they extend a more cordial invitation to come and look over their varied burden. On the other hand, they compel frequent dusting. Glazed doors are just the reverse—they seem to shut one out from their contents even though they do take better care of these. It seems to me that there should be both kinds of cases in the library—open shelves for the good old thumb-marked favorites, glass doors for the better dressed though perhaps less loved volumes.

Then we come to the matter of the amount of shelf-room as compared with the number of volumes. Few things are more

The shelves are set back into the wall here, and there are no shelves set uncomfortably near the floor

Putting bookshelves up over doorways may be wall decoration, but it is surely not library convenience

dismal and depressing to my mind than a lot of empty bookshelves. Have too many books for your cases rather than too few. In one library of my acquaintance the books have overflowed shelf, bookracks and tables, until now there are several piles of the larger volumes on the floor under the table, yet the effect is not in the least objectionable. There arises at once the question, "But shall we not in our new house allow for a reasonable expansion of our library?" Personally, I would not. One can always have additional cases built to match the old work; let them come when they are actually needed. Just here is where the unit system of sectional bookcases comes to the fore with its unanswerable argument that your bookshelves may grow along with your library. Incidentally, the way in which these varied units may be built along walls, under window-sills, surrounding desk sections, cupboard units and drawers is positively amazing.

The combination of desk and flanking shelves suggests a real working library

Making the bookcase fill the place of a low wall is economical planning

The matter of doors comes to the front again under the next factor of protection. But there is a choice even here. Most of the bookcase glazed doors one sees are hinged to swing out. Occasionally one finds doors that slide, one outside of its neighbor. The first illustration at the bottom of this page shows built-in cases that could not have hinged doors on account of the adjacent seats, but the convenience of such an arrangement makes one wonder why the doors are not oftener built this way. The sectional bookcase door, sliding back over the top of the books and prevented from slamming by the natural cushion of air in the case, is an ingenious and convenient protection. Curtains over shelves neither really protect the books nor have they any excuse for existence on the score of beauty. Adjustable shelves will go far towards keeping the books in better condition if the latter are grouped according to their height. The distance between shelves may then be made very slightly larger than the height of the row, with a resulting protection against dust. An ingenious improvement upon this idea is seen in the shelves in the President's office, illustrated below. A scalloped leather strip has been fastened with brass tacks to hang down from each shelf, effectually keeping out dust without impeding the taking out of any volume.

The sectional bookcase's unanswerable argument is that with it your shelf space may grow readily with the number of your volumes. Units for cupboards, drawers, desk and so forth, make possible a great variety of arrangement

You may have built-in cases to match the woodwork, shelves sunk back into the walls, an antique secretary, a combination of unit sections, or portable cases to match your furniture woodwork and finish—according to your taste. And there is a great opportunity for an expression of your personal taste here—the choice and finish of wood, the design and grouping of the cases as a whole, the patterns of the doors, with square or diamond panes, the choice of hardware. In any of these your books may be properly cared for and made to reflect in their ranks your individuality.

Sliding rather than hinged doors are necessary here and are very convenient on any case

The President's office in the White House also contains the leather-flap-protected adjustable shelves

Ripen forced bulbs in a cellar window and they will bloom outdoors next year

Save Potted Bulbs for Garden Bloom

DO NOT DISCARD BULBS OF HYACINTHS, CROCUS, TULIP OR NARCISSUS—RIPEN THEM FOR PLANTING OUTDOORS NEXT FALL

BY I. M. ANGELL

EVERY year, in late winter and early spring, many potted bulbs are sacrificed for lack of knowledge as to the treatment necessary, after they have finished blooming, in order to ensure success in the garden. This is useless squandering of valuable material, for very little care and attention will ripen these bulbs properly, so that they may be planted in the dooryard the following fall and give many seasons of bloom. These facts apply especially to the Dutch bulbs, hyacinth, tulip, crocus and narcissus, so commonly grown by the florists and used as gifts during the cold months. Their blooming season can be lengthened by keeping the plants in a cool room, for a hot atmosphere will make quick work of them. Instead of throwing them away when they have lost their beauty, they should be kept to plant in the yard or garden.

A light cellar window will be a good place for the ripening of bulbs that have been forced. They will not need as much water as when blooming, but an occasional drink will be necessary, so that they may dry out gradually. The leaves will turn yellow as the bulbs ripen, but must not be cut off, even though they appear unsightly, for the flowers of the coming season will depend on the foliage of the past season. On this account the leaves must never be either cut or bruised, for they must mature properly to give the bulbs their full size and strength.

When the leaves are entirely dry the bulbs are ready to be taken from the pots and stored until October, the best month for the outdoor planting of most of our common bulbs. A temperature of forty degrees is best for the storing of these bulbs. They should not be packed airtight, but somewhere not out of reach of a supply of fresh air and yet away from bright light and mice.

Bulbs require a spot in the garden that is well dug and well drained. Very old cow manure is the best fertilizer and even that would better not touch the bulbs. If only fresh or coarse manure is attainable it would be better to do without, or to use bone meal. One method of providing drainage and avoiding contact with the manure is to remove six inches of the top soil, thoroughly dig and mix the fertilizer, then level off the spot and cover it with an inch of sand, set the bulbs upon this and then cover with the top soil that has been taken out. As soon as the surface of the ground becomes frozen in early winter a covering of four to six inches of straw or similar protection will be necessary. This must be removed in the early spring before the bulbs send up their foliage, or the leaves will be bruised in the handling.

Plant narcissus bulbs three inches deep and a little more than that apart. They will give longer bloom if the bed be in a partially shaded spot. If cut while still in bud, narcissus will open perfectly in water and will also carry well if wanted to send away. Narcissus bulbs succeed best in a turfy loam, and demand frequent watering in the growing season. The beds would be benefited by a dressing of manure in the fall. The flowers are of better quality if cultivation is not too frequent.

Bulbs of tulips should be planted about five inches apart and the same in depth, in sandy loam that has been dug a foot deep. If they are to be used as a formal bed for bloom at the same time, care should be taken to set them at an even depth. Delicate varieties of tulips will require protection from rain and hot sun. A soil that has been well enriched the previous year is especially suitable to tulips. They flourish best in an open sunny spot.

Hyacinths should be planted from the first to the middle of October, as it is best that they should make good root growth in the fall. Their roots are sometimes over a foot in length, so a deeply dug bed will be necessary. When set, the bottoms of the bulbs should be six inches below the surface of the soil.

The quickest way to plant crocus bulbs, or rather corms, is to make a trench three inches deep, then set them three inches apart in the row. It is better to destroy all bruised and imperfect corms for they are liable to be attacked by fungus and may infect the others. A soil free from clay is most suitable, and a location that is open and sunny. To plant crocus in the lawn cut out a sod, set several corms, then replace the sod; this will protect them through the winter and in the spring they will bloom and ripen their foliage before the lawn is ready for the mower.

When the bulb bed is made it must not be considered permanent, for transplanting, at intervals, will be necessary for the welfare of the bulbs. Hyacinths require transplanting every year, crocus and narcissus every three or four years; the former because the new corms will push too near the surface and the latter because the plants will become weak and possibly refuse to bloom. Tulips will give better results if transplanted every year. The bulbs must be entirely dormant for transplanting. They

(*Continued on page* xv)

The walls of "Upwey" are of local stone and stucco, with touches of half-timber work

From one corner of the living-room opens the ombra, which displaces the living-room in summer

"Upwey," a Distinctive Country Home

MR. ERNEST E. CALKINS' HOME AT ELMSFORD, NEW YORK—A GROUP OF BUILDINGS ON AN UNUSUALLY PICTURESQUE SITE MARKED BY INDIVIDUALITY OF DESIGN AND FURNISHING

BY GARDNER TEALL

Photographs by Jessie Tarbox Beals

A glimpse of the stable and gardener's cottage

THE quality of picturesqueness in a Surrey cottage, a Breton farmhouse, or a Swiss chalet is much a matter of Architecture wedded to Landscape. This tendency, fortunately, has entered America, and our modern American country houses are coming to add the element of picturesqueness, almost extinct in the land when the nightmares in lath-and-plaster of 1850 were trying to banish the Colonial dwellings of our forefathers.

American country house architecture has long since found itself on a foundation of taste and good sense ingeniously welded by our now well developed appreciation of the beautiful, and our understanding of the fitness of things—of the relationship of any building to the site it has been designed to occupy.

There is hardly a more successful example of such a country house than one may find in "Upwey," the attractive home of Mr. Ernest Elmo Calkins at Elmsford, New York, built on the crest of a rocky wooded hill, and looking down over the valley across to the hills that flank the Hudson river. It is not a large house, but a wonderfully well arranged one, beside which stands the gardener's cottage and stable, all connected by walls of massive native stone bringing the buildings into harmonious relationship one with the other.

"Upwey" is distinctly an expression of the individual taste of its owner, and every line and nook and corner of it indicates the careful thought that he has given to its conception. From northern France, and again from England he has brought back with him a suggestion of their architecture, which one finds in the delightful arched and recessed doorways, as well as in the overhanging roofs. When the ivy has grown in great patches to cover

From the ombra one looks out onto the tree-tops and over the valley beyond

Mr. Calkins' bedroom is furnished in oak to match the brown trim; the walls are buff

Every bedroom has a fireplace, and all are faced in rough-textured brick

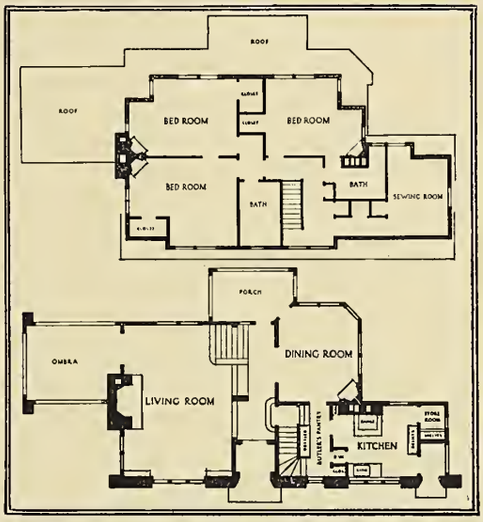
White woodwork, blue walls and mahogany furniture mark Mrs. Calkins' bedroom

the native stone and stucco walls of the buildings, the effect of an English cottage will be heightened, especially as here and there a bit of half-timber work peeps out.

The house is approached from the east by a broad brick walk to the main door, and now the grass plots are squared off and flanked with native stone walls along the roadside. As you cross the quaint little vestibule, five feet square, and enter a doorway some four and a half feet broad, you may look right through it to a window at the end of the hall, through which, and across the dining-room porch (though having come from ground level but a step) you see the tree-tops in the rear of the house to the west, which is occasioned by the house's being built on the very edge of the hill's crest.

Indeed this house is a home of surprises as well as delights. The three windows, with their mediæval leaded five-inch panes which you have seen to the left of the front doorway at your own height, you will find, once you have entered the large living-room which they light, some distance above your head, for the exigencies of the site have brought the level of the living-room floor six feet, or eight steps below the entrance hall, which has, in consequence, the effect of a gallery.

The woodwork of the living-room, as well as that of the hall and dining-room, is brown oak, sand rubbed and waxed, a treatment that brings out the grain of the wood in all its beauty. Perpendicular oak planks of various widths, with slightly rounded edges where they are joined, form the wainscoting, and their finish gives them precisely the effect of being time-mellowed.



Living-room and ombra are at a level below the main floor, the former being fourteen feet high

The interior walls are all left in rough plaster, variously tinted. Those of the living-room are a rich pumpkin yellow, and the parti-colored tapestry brick of the great fireplace, which has an opening five feet across, are in harmonious contrast with them and with the woodwork. Perhaps one of the most striking things about this fireplace is the projecting hood above it, which is not a smoke hood, but suggests certain old Tuscan chimney arrangements, made for attractiveness.

All the fireplaces in the house—there are five—have the good fortune to be as useful as they are beautiful, to be part and parcel of chimneys that draw, and keep the hearths cheerful in winter time. They are all of the same order of brick, with tiles of faïence set in, flush with the surface.

Sideboard and china-cupboard are built in with the brown-stained oak dining-room woodwork

From the living-room you step out upon the *ombra*, the great shaded porch that looks directly into the tree-tops and makes you feel that you have come into the very house of Peter Pan and Wendy! Boxes of scarlet geraniums add color to the tree-scape round and about you, and there you may sit all the happy summer long with birds for nearer neighbors than perhaps you have ever had before.

But the living-room is not alone in its proud possession, for the dining-room too has its distinctive porch, where one may sit between heaven and earth, but undizzily, and enjoy the fat of the land to the music

There is no wall paper in the house, all walls being tinted rough plaster

An outdoor dining-porch is one of "Upwey's" most enjoyable features

A heavy wooden hood breaks the high expanse of living-room chimney-breast

of rustling leaves. Surely it is worth while getting up early to breakfast in such a jolly retreat. The entrance to this porch from the dining-room is through one of its corners, for the corners of the room have been cut off by windows, china cupboard and fireplace to an octagon.

The arrangement of the kitchen part of the house is one of exceptional excellence. It would be a difficult thing to find a more convenient one the country over. The woodwork of this part of the house is all finished with an impervious enamel, while the walls are a flat tone of light tan. The door to the north gives access to the gardener's cottage, containing quarters for the servants, thus easily accessible to them. This gardener's cottage contains a large living-room on the first floor, with two large bedrooms and bath up stairs. All the walls of the rooms here are rough finished and toned with flat colors.

The second floor of the house contains three large bedrooms and baths, and a sewing-room.

One of the bedrooms is finished in white enameled woodwork, with rich porcelain-blue walls; another is in brown oak with buff walls; and the guest room in bog-oak with gray-green flat tones. All the floors are stained and waxed and covered with unusual rugs, in geometric pattern, of a modern sort woven to-day in parts of India, though they are not often met with in American houses. There is also a little extra bedroom in the basement of the house, and this, too, has bog-oak and gray-green in its scheme of finishing. The walls throughout the house have been left so rough and the applied color is so rich in hue that they have the tone that comes to beautiful soft-toned pottery.

The stable interior is stained a rich brown, and all the ironwork about it is painted black. Stable-room for four horses has been provided, and the stone wall around the stable-yard runs breast high.

Summer will bring the garden at "Upwey" into a luxurious profusion of lovely plants, flowers and blossoming shrubs, with here and there the emerald of the evergreens. Every day it is becoming more and more a thing of beauty, and it could not help but be a joy forever.

It needs but a glance at the illustrations to see that "Upwey" has been finished, furnished and decorated in a manner that is radically different from the great mass of modern homes. The cause, of course, lies not only in the owner's taste but to a large extent also in his ability to secure the results that his imagination pictured. In this connection it is interesting to note that a cardboard scale model was made of each room, and the decorative and color schemes tried and changed until found satisfactory.

Of course a dozen persons can build the same sort of a house, and each pay a varying cost, according to his selection of the grades of materials, the interior finishing, and according to a hundred and one other things that become divergences from original estimates. Probably under favorable conditions one would expect such a house to cost him from eight to ten thousand dollars, depending again on the lay of the land, or it might cost him materially less if he adopted some of its ideas only to incorporate with others meeting his own peculiar requirements.

In winter the stucco walls and dark curving roof make a picturesque mass against the bleak trees

From the front the house is entered from a grass terrace. At the right is the service entrance

Practical Talks With Home-builders

THE MATTER OF AN ARCHITECT'S FEE—WHAT IT AMOUNTS TO AND WHAT IT COVERS —THE DESIRABILITY OF A WRITTEN AGREEMENT BETWEEN CLIENT AND ARCHITECT

BY ALEXANDER BUEL TROWBRIDGE

[This is the fourth of a series of intimate helpful talks with those who are about to build. The aim is to offer untechnical suggestions to prospective home-makers in the hope that many of the common mistakes and difficulties may be avoided through foreknowledge. The talks are written for those of moderate means rather than for those to whom economy is no object.]

ONE of the important items of expense which should be included in the sum total of a home-builder's calculations is the architect's fee. If the owner is the kind of person who is easily satisfied with that sort of thing he can buy ready-made house designs and working drawings from plan factories. These factories state in their catalogues the cost of each house advertised and they gravely assure the resident of Michigan as well as the man in Florida that the dwelling will cost so and so, disregarding entirely the differences in cost of materials and labor in these communities. If, on the other hand, the owner wants a home to fit the especial needs of himself and family and particularly if he wishes to take into account the many seemingly extraneous items that must of necessity be included in a complete home, he not only needs an architect but he should employ a good one at a good price. It is no longer possible to secure a first-class architect for the fees that were in common use fifteen or twenty years ago. To-day the minimum charge of the leading architects for all services, including supervision, is 6 per cent of the finished cost. Many architects charge from 7½ to 10 per cent for country house work and have no trouble in collecting such fees. A mistake is often made, equally by client and architect, in avoiding a frank discussion of fees during the first negotiations. This may be due to the assumption on the part of the architect that his fees are well enough known, or it may be due to a notion on the part of the client that the old fee of 5 per cent is enough to cover all matters which may arise. Most architects have a printed schedule of charges which gives in detail the fees for various types of buildings and states the manner in which payments are made. Because these schedules are not uniform throughout the offices it would be better for the client to ask at the outset for a copy of his architect's schedule. It would be helpful also if client and architect would discuss frankly in the beginning the application of the schedule in case the cost grows beyond the amount proposed to be used or in case the owner cuts down the size of the house after bids have been received. It not infrequently happens that disappointment arises through the difficulty of reconciling what an owner asks for, with the amount he wishes to pay. Often an owner brings to the architect an outline plan indicating the number of rooms he wishes and their dimensions. It is here he should be explicit regarding the sum of money available for the work If he has $20,000 to use on the house, irrespective of grounds, water supply, sewage disposal and outbuildings, let him say $17,000 to the architect, stating that this sum must include architect's fees. He will not regret the $3,000 margin thus provided, as he will find ample use for it in paying for changes and extras that may arise as the work proceeds.

It is unfair to try to hold the architect responsible for unsatisfactory estimates. He is not a contractor; is not in daily touch with the fluctuations in the cost of labor and materials and does not find it possible under existing conditions to keep an estimating department. There are times when contractors' estimates will vary as much as 50 per cent, with all bidders figuring from the same plans and specifications. If builders disagree so radically it can hardly be expected that an architect can make a closer estimate than some of these builders. The usual method employed in an architect's office is to calculate the cost on the basis of a price per cubic foot of volume of the entire house or per square foot of the area of the principal floor. Such calculations are only reliable when the architect is able to compare the proposed building with one already constructed of similar materials. High estimates are very frequently caused by additions to the size or quality of a building as the drawings and specifications are being developed. An owner will start with economical ideas and will be carried away by his desire to build "for all time." The estimates come in and are high. The client is amazed and frequently blames the architect.

The usual custom, when bids are high, is to see what can be cut from the specifications in an effort to reduce the estimates. Sometimes this can be done successfully when the original specifications have been especially complete, with only the best materials included. If the estimates are as much as 20 or 25 per cent high the best solution is to order a new set of plans with a house three-quarters the size and volume of the original. In cases like this the owner is likely to find fault with the architect, and, it must be admitted, there are times when the blame is deserved. Yet the situation is likely to produce friction if the question has not been frankly threshed out in the beginning.

The writer believes that the most satisfactory procedure is to make a contract with the architect for preliminary sketches and to require an approximate estimate from some reliable builder as a part of the contract. The fee for preliminary sketches is usually one-fifth of the total commission, which, for a house costing $17,000 would run from $238 to $340 according to New York City prices. For this fee an owner may expect careful studies of all floor plans and elevations, an outline specification and a perspective sketch. The fee would be considered a payment on account in case the working drawings were made. The estimate thus obtained would not be a bona fide bid but it would serve excellently to show the owner what his outlay would have to be. He might then decide to reduce the size of the house or to add to it. These matters can be far more satisfactorily adjusted in the sketch stage than through alterations to working drawings.

These agreements between client and architect would better be made in writing. Often the architect will mail his printed schedule to the owner and ask his acceptance of the terms therein contained. While this has many times been entirely satisfactory it still seems evident that something should be said by the owner to the architect with reference to the charges in case the cost, for one reason or another, runs far beyond the original proposed cost, and by the architect to the owner in case cuts are made, involving much time and trouble to the architect for which he may receive only a reduced fee. The system of charges is not ideal but is the best that has been devised by many generations of able men. The difficulties may be largely avoided by a simple agreement entered into at the start which will either accept without question the schedule as printed or will describe the interpretation that will be given to the schedule in the event of changes.

If you would gather a continuous supply of such vegetables as these, make your planting plan now

Grow Your Own Vegetables

PLANNING FOR AN ADEQUATE SUMMER-LONG SUPPLY FOR A FAMILY OF FIVE—WHAT VARIETIES TO SELECT FROM AND HOW MUCH SEED AND SPACE THEY WILL REQUIRE

BY F. F. ROCKWELL

[This is the first of a series of articles which will cover in a thorough and practical way the subject of amateur vegetable gardening. The aim is to furnish information covering every detail of what to do and in such a form that it will be clear to the very beginner just how to do it. Each article and its tabular data will give the information needed at the time of its publication, so as not to confuse the home-gardener with an overwhelming quantity of detail; that is, the reader will learn what is to be done at the proper time for doing that particular thing. Those who follow the suggestions made, from the selection of seed to the storing of winter vegetables, may confidently expect a successful garden.]

THERE are thousands of people in this country who are missing one of the greatest comforts of this life—a supply of fresh, home-grown vegetables, merely because of a misconception, or no conception at all, regarding the amount of space a home vegetable garden would require. Of course, everyone realizes that he could grow one or two vegetables in his garden, however small that may be, but he vaguely believes that an enormous amount of land would be required to really do the thing properly—and it isn't much use doing it by halves.

Let me assure all these groping thousands, therefore, at the outset, that all the vegetables your family of five will eat this coming summer can easily be grown in a garden 50 x 100 feet. The expense is trifling, the time readily found in the lengthening days, and the resulting luscious fresh vegetables, brought in with the dew still sparkling upon their sleek fat sides, will open your eyes to a new joy of living.

The altogether inexperienced person may quickly learn to be a successful "grower." There is no mystery, not even a difficult art, about learning to grow successfully all the usual table vegetables. In the great majority of cases those who try, and do not succeed, fail because they have attempted to follow some special "method" before they had mastered or even ascertained the few

Varieties the author has tried and found true, given in the order of their ripening. Names in capitals are recommended for the main crop. Quantities indicate amount of seed or number of plants needed for a 50-ft. row.

Asparagus	Barr's Mammoth; Palmetto	50
Bean, dwarf	Extra Early Red Valentine; Improved Refugee; GOLDEN WAX; (lima) Burpee's	1 pt.
Bean, Pole	Golden Cluster Wax; OLD HOMESTEAD; (lima) Early Leviathan	½ pt.
Beet	Edmand's Early; Eclipse; CRIMSON GLOBE	1 oz.
Broccoli	White French (resembles cauliflower but hardier)	40
Brussels Sprouts	Long Island Improved	40
Cabbage	(Early) Jersey Wakefield; Glory of Enkhuison; Early Summer; SUCCESSION; (Savoy) Perfection Drumhead; (Red) Mammoth Rock	25-40
Carrot	Early Scarlet Horn; DANVERS HALFLONG; Oxheart	½ oz.
Cauliflower	(Spring) Early Snowball; (Autumn) Algiers	25
Celery	(Earliest) White Plume; Golden Self-blanching; (best for winter) Giant Paschal	100
Corn	Golden Bantam (early and sweet); Cory; STOWELL'S EVERGREEN	½ pt.
Cucumber	Extra Early White Spine; FORDHOOK FAMOUS	½ oz.
Egg Plant	Black Beauty	25
Endive	Broad Leaved Batavian	½ oz.
Kale (or Bonesole)	Dwarf, Curled Scotch	25
Kohlrabi	Early White Vienna	¼ oz.
Leek	American Flag	½ oz.
Lettuce	Big Boston; (Loose-head) Simpson; Mignonette (recommended); NEW YORK; (Cos) Paris White	50
Melon, Musk	(Green-flesh) Netted Gem; (salmon-flesh) Emerald Gem	½ oz.
Melon, Water	Cole's Early; Sweet Heart	¼ oz.
Okra	(For northern states) Perfected Perkins' Long-Pod; (southern states) White Velvet	25
Onion	White Portugal; Red Weathersfield; Yellow Danvers; PRIZETAKER	½ oz.
Onion Sets	(You can get at the hardware stores)	1 pt.
Parsley	Emerald	½ oz.
Parsnip	Imperial Guernsey	¼ oz.
Peas	(Dwarf early) Alaska; GRADUS; Boston Unrivaled	1 pt.
Pepper	Ruby King	25
Potato	Early Rose; Early Harvest; GREEN MOUNTAIN; Vermont Gold Coin	½ pk.
Pumpkin	Dunkard; Quaker Pie	¼ oz.
Radish	Scarlet Button; Early White Turnip; CRIMSON GLOBE	½ oz.
Rhubarb	Myatt's Victoria	25
Salsify	Sandwich Island Mammoth	¾ oz.
Spinach	Victoria; (for summer) New Zealand; (for continuous cutting Swiss Chard (Beet) is especially recommended)	½ oz.
Squash	(For summer) Bush Fordhook; Delicata; (winter) Hubbard	½ oz.
Tomato	(Earliest) June Pink; Fordhook First; MATCHLESS	20
Turnip	Petrowski; Golden Ball; (Rutabaga) Purple-top Yellow	½ oz.

fundamental requirements of plant life. All this specialized information has its use; much of it is very good; but it has no place among the instruction papers of the beginner.

By all means plant a garden of your own if you are so fortunately situated that a small piece of ground is available for your use. It need not be large. If you are planting your first garden, the chances are that you will grow more on a 50 x 100 foot lot, or even one of less area, than upon one four times that size. And it need be no special sort of soil, nor have any particular "exposure." A light, sandy loam and a southeastern slope are preferable, but they are not at all essential.

Do not be so improvident as to prefer spending small sums of money for vegetables every week in the year, rather than laying out a few dollars now for seeds and fertilizer. Do not be averse to taking a little pleasant and healthy exercise, daily if possible, which the work required by a small garden will give you. You will not only have better vegetables, but a keener appetite with which to enjoy them.

Let us suppose, then, that you pass the excellent resolution to have a garden of your own this year. The first thing to do is to select a garden site. It should be near by, so that you can step right out into it if possible. Pick out a spot that will begin to warm up in the very first spring days, sloping to the south or east if you can find one; or south of some building. Even an old wall, bank or fence to the north will give you a surprising amount of shelter. Don't be too ambitious about the size of it. You will absolutely get more from a tenth of an acre thoroughly cultivated than from an acre indifferently cared for, and with half the expense, fuss, and worry.

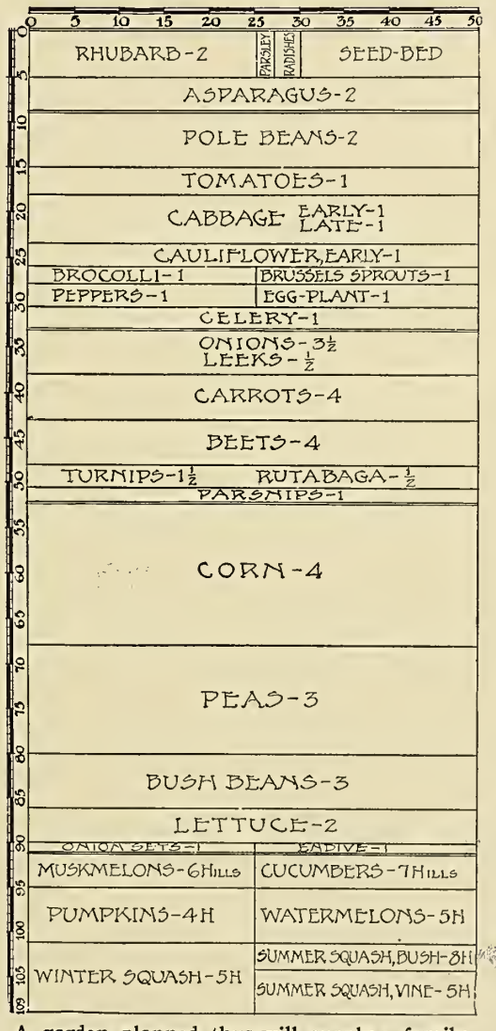
As to soil, the nearer you can come to a light, sandy loam, the kind that breaks up and crumbles all to pieces when you pick up a handful of it, the better. But as stated above, such a soil is by no means essential. The treatment of other soils, to make them as near the ideal as possible, will be taken up in a later article, as will also the question of fertilizers and their application. The thing that you should get to work on *now*, is the planting plan.

Don't leave the planning of your garden till you are ready to put the seeds in the ground, and then go at it haphazard. The beginner is apt to start in with his packets of seeds, plant the entire contents of each as far as it will go, all at the same time, and congratulate himself upon having the job done. It is—and so is his chance of having a satisfactory garden! A little careful thinking will save you much trouble. You should determine the quantity of each vegetable you are likely to use, and try to grow enough of each, and no more. And it is just this that the planting plan will enable you to do.

Take a large sheet of writing paper and a ruler. Use a scale of one-fourth or one-eighth of an inch to the foot, and rule off a space the size of your garden. Rows fifty feet long will be about right for the ordinary garden. We will take this length to figure with, and it may be changed in proportion, where rows of that length are not convenient. In a very small garden it will be better to make the rows, say, 25 feet long, the aim being to keep the row a unit, and have as few broken ones as possible. In the plan herewith, we have supposed the garden to contain vegetables only. If berries and fruit are to be grown, give them a space to themselves.

You will notice that crops that remain for several years, such as rhubarb and asparagus, are kept at one end. Next come such as will remain a whole season—parsnips, carrots, onions and the like. And finally those which will be used for a succession of crops—peas, lettuce, spinach, radishes. The space given to each variety is allotted according to the proportion in which they are usually used. If you happen to have a special weakness for peas, and an aversion to onions, keep these and similar tastes in mind when laying out *your* planting plan.

For the amateur in gardening one of the most bewildering questions to settle is what varieties of the various vegetables to plant. It is hard enough if he takes one seed catalogue and tries to solve the problem. But if he receives half a dozen, as will likely be the case, he will find a hopeless task when he attempts to make his selection according to the contradictory descriptions of what have come to be called "standard" varieties, and the eulogies of "novelties." Happily some seedsmen are beginning to see that this habit of unreasonable exaggeration is a mistaken policy, and I notice that one large house this year states in the advertisement for its calatogue, that it "contains the *least* extravagant claims of any seed catalogue in America"!—and I believe this good example will be followed extensively. I shall therefore in attempting to give suggestions which will be a help to the inexperienced vegetable grower, confine myself to those varieties which have proved themselves superior, under general conditions, and which are by far the more certain to give satisfactory results. I do not mean by this that all new varieties should be taboo. It is extremely interesting to experiment with them. By all means try a few novelties—but for the first year *try* them only.

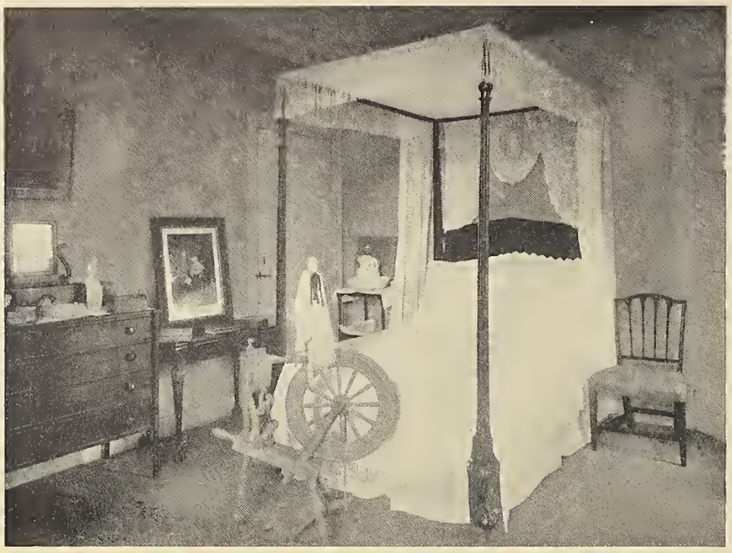


A garden planned thus will supply a family of five with summer and winter vegetables in plenty. Numbers indicate rows or hills. The scale in feet is shown at top and side

In passing, I want to emphasize as strongly as possible that always *it is cheaper to buy the* BEST *seed than to have any other kind given to you.* Buy your seed by mail from one of the many dependable houses whose reputation you know. Do not allow yourself to be allured by convenience or by the beautiful lithographed packets, displayed in hardware stores and grocery windows, into buying the class of seeds sold in this way. In some cases you *may* get good seeds, but in many you will surely repent your folly—when it is too late. And in any case it is an expensive method of buying, and one by which you can seldom get just what you want.

The varieties listed have all proved themselves "tried and true" in most sections of this country. The few which are of recent introduction have won at once, the rank of standards, as new varieties sometimes do. Where several varieties are mentioned, I give them in the order in which, as a rule, they will be ready for use. They are of course selected, first of all, for quality, not for

(*Continued on page* xvi)



The purists' Colonial bedroom is stately and restful, though too austere for many people

The wall paper pattern has been extended across the cove to the ceiling by cutting out the floral design

Decorating the Bedroom

SUGGESTIONS FOR ITS TREATMENT AS REGARDS WALL COVERINGS, FURNITURE, FLOOR COVERINGS, WOODWORK AND COLOR SCHEME—THE ROOM PRESENTING THE OPPORTUNITY FOR INDIVIDUALITY

BY MARGARET GREENLEAF

Photographs by Leon Dadmun, M. H. Northend and others

IN the bedroom the individuality of the occupant is more in evidence than in any other room of the house, as such rooms or suites are complete in themselves and need not necessarily be considered relatively. Where the house has the marked characteristics of any period the architectural detail of the wood trim in the bedrooms as well as that in the other apartments will, of course, express this and must in a measure influence the furnishings, but even under these conditions more latitude is permissible in the chambers than in the living rooms.

A room in which no period idea is dominant may be made very charming, and the individual taste of the occupant may influence the entire scheme of decoration. A very dainty and attractive room is shown in the second illustration at the top of this page.

The floral paper used on the side wall here is beautiful in color and design, and the crown of this has a cut-out extension of flowers and leaves that is applied directly to the ceiling proper. The furniture of ivory enamel finish has been painted with clusters of the same flowers as those shown in the wall paper. Much of the green of the foliage in this design is repeated in the two-tone rug upon the floor. The curtains and bedspread are made of ivory white linen taffeta and bordered with four-inch bands of cretonne showing the same floral design as the side walls.

Have some restful white or plain color in either the wall coverings or hangings

Much of the comfort as well as the attractiveness of a bedroom depends upon the arrangement of the furniture it holds. The space for the bed is usually indicated by the architect in the first drafting of the plans, and should be adhered to unless the room is unusually large. However, the other furniture may be arranged and rearranged until the right position is found for each piece.

Where a couch is included this may be placed near the window with the bookshelves conveniently at hand, or it may be set directly across the foot of the bed. The reading- or work-tables and easy chairs should find their permanent place, as their proper grouping adds much to the livableness of any room.

The English idea of placing a dressing-table directly in front of a window is not especially favored here as we are loath to sacrifice so much of direct sun and air as the closed window would necessitate, although by such an arrangement we secure a good overhead light.

The placing of the lighting fixtures should also be given some careful study. Side or drop lights should be near the dressing-mirror, and a convenient stand or drop light, well shaded, should be placed near the head of the bed. And a well arranged table light for reading and sewing is of great convenience in a large bedroom which is used at all as a sitting-room. However small the room, the light must be well arranged for the dressing-table. A central light for a bedroom is a very objectionable feature and should never be included.

Light and crisp colors are more acceptable in the decorative scheme of the bedroom than any other room of the house. Where

plain walls and figured cretonnes or chintzes are used in combination the latter should appear generously, that is, not only in valanced curtains at windows, but as slip covers, or cushion covers for chairs, window-seat or lounge.

The old-time idea of a blue, a pink, a green, and a yellow room is falling into disuse, although any one of these colors may be brought out prominently in the scheme of the room, or, as is even more usual, all may be combined in either wall covering or drapery material. The dominant color should appear again in the plain or two-tone floor covering.

Plain and embroidered muslins for window draperies and covers for dressing-tables are effective and dainty, and by having two sets for a room it may be kept always delightfully fresh and clean, as these muslins launder well. A small coin-dot of color on a very sheer, though not fine, white ground can be purchased from 25 to 35 cents a yard and gives a dainty charm to a room in which it is freely used that few other fabrics at the same cost will supply.

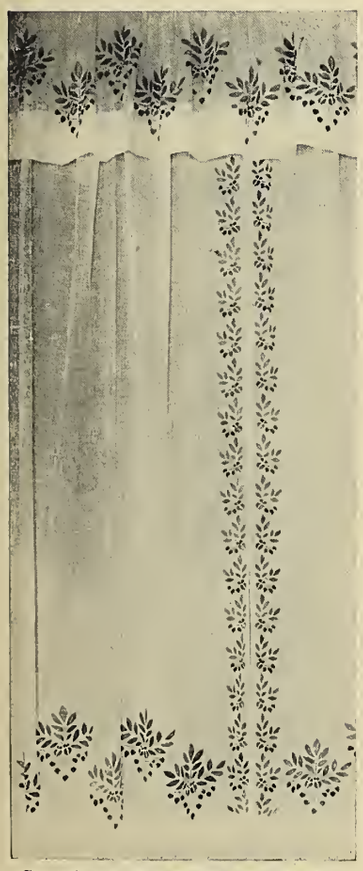
Where the decorative scheme must be very inexpensively carried out, a floral paper on an ivory ground can be purchased for 25 cents a roll of eight yards. In these cheaper papers one finds a better selection in yellow and old rose than in other colors; greens, too, are usually soft and attractive. If plain colored overdraperies are desired for the windows these may be made from cheese-cloth which has been dyed to the desired shade, matching the color of the flower in the wall paper. It is not a difficult matter for the amateur to do this successfully.

There are now made some very attractive cotton crepes showing a variety of floral and other patterns. Some of these are beautiful in color and good in design, and, with plain tinted walls, a room in which the curtains and slip covers for cushions and pillows are made from this fabric is very attractive.

Old furniture may be revamped and given a fresh coat of ivory white enamel, and a central rug or a number of small rugs made after the old-fashion rag carpet in one or two colors makes a satisfactory floor covering for use in such rooms. If the woodwork can be painted ivory white the scheme is more successful, as this is an important factor in the completed whole. In fact for bedrooms there is no better finish than the ivory white enamel. It is easy to apply and durable, and harmonizes with almost any scheme of furnishing one may desire to bring out in the room.

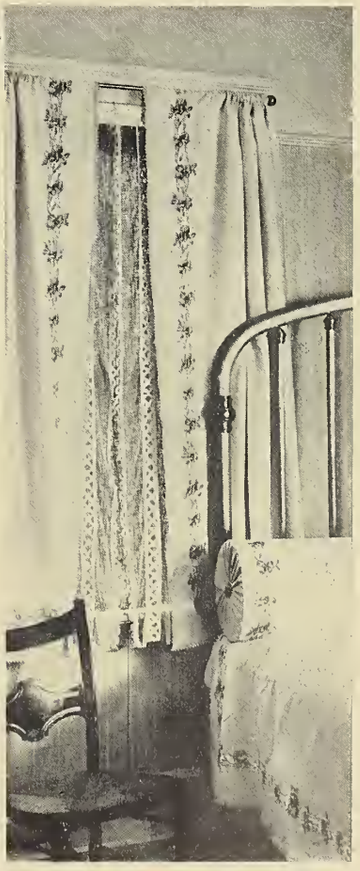
Attractive little shades for electric lights or candles may be made from bits of silk or even tissue paper, and, used in a room in which old rose predominates, the effect is charming, as the light showing through the rose color is very soft and pleasing. Pressed glass tall candlesticks may be bought for 25 cents apiece, and, fitted with such shades, find an acceptable place on the dressing-table, where they harmonize well with the silver.

A fairly successful attic bedroom, though a plain tinted treatment above the picture molding would probably have improved it



Curtains and valance stenciled in blue for the bedroom

The white walls and straight-hanging curtains make an excellent setting for the fine old mahogany



A cut-out cretonne appliqué on taffeta for curtains and coverlet

THE FORMAL FLOWER GARDEN OF MR. WM. B. THOMPSON AT

EW YORK. Mr. Charles W. Leavitt, Jr., Landscape Architect

THE FORMAL FLOWER GARDEN OF MR. WM. B. THOMPSON AT [illegible]RS, NEW YORK. Mr. Charles W. Leavitt, Jr., Landscape Architect

The Red Birch is known by its curious bark

There is no tree more valuable than the Birch as a decorative adjunct to the garden

American White Birches add to any landscape

All the Birches Worth While

THEIR DISTINGUISHING TRAITS AND VALUE FOR LANDSCAPE EFFECTS—NOTES ON THEIR PLANTING AND CULTURE

BY EDWARD C. CARROLL

Photographs by N. R. Graves, Thomas W. Sears and others

THE Birch is the sprite of American forests, the phantom of the tree world and one of the most graceful units of plant life which the landscape gardener may introduce into his plans for beautifying grounds and gardens. That writers have neglected the practical phases of its place in arboriculture is due, perhaps, to the great temptation to give the Birch its due of poesy to the neglect of its more prosaic features, though these need not detract from its charming individuality as the "little Princess of trees"—so Hans Christian Andersen called it.

Indeed the cultural side of all the Birches worth while considering in their relation to the home landscape is fraught with interest to every home-maker with the planting instinct. Our own country gives us some ten of the twenty-eight species known to the northern hemisphere, but only six of these need concern us, and a seventh, the European White Birch, which we have adopted for our gardens and our lawns.

The Canoe Birch is the most beautiful native American species

As ornamental trees the American Birches are all somewhat more graceful than the forest birches of Europe, but many persons have neglected them because they are not long-lived like the oaks and the elms. However, this is a poor excuse for not encouraging Birches; although a thing of beauty may not live to be a joy forever, still their twenty or fifty years of life is sufficient in its period to produce proof of their worth as objects of beauty. Moreover, the decorative features of Birches are so unique they should never be overlooked by the tree planter merely because they belong to a short-lived family. Indeed this very quality of decorativeness gives the Birch a place distinct from that of other trees to which we look for shade or protection, or fruit, or screening; it should be utilized to lend grace, color and interest to the landscape, and it is an essential thing to remember this.

No tree is more hardy, when it has had half a start. Indeed the American Birches grow farther north than any other genera. Their foliage is rarely attacked by insects, and their branches require less spraying than those of other trees. Moreover, they thrive in almost any soil, though preferring a moist sandy loamy one. The following is a check list of Birches one may safely recommend for landscape setting:

BIRCH	BOTANICAL NAME
1 American White Birch	*Betula populifolia*
2 Canoe Birch	*Betula papyrifera*
3 Yellow Birch	*Betula lutea*
4 Red or River Birch	*Betula nigra*
5 Cherry or Black Birch	*Betula lenta*
6 Western Black Birch	*Betula occidentalis*
7 European White Birch	*Betula alba*

Birches flower in catkins of yellow blossoms, being prolific seed producers, for it is estimated that a pound of Birch seed contains 800,000 separate seeds. When propagated by seeds these should be covered as soon as gathered at maturity, or else stratified, and sown in the early fall. With the Red Birch (*Betula nigra*), however, its fruits ripen in June, and its seed must be sown at once, and by fall its seedlings will have reached a height of several inches. All the Birches are rapid growers, and they are also among the trees which sprout from the stump when cut. Birch seed should be sown in sandy soil, slightly covered, if at all, and firmly pressed into the ground. It germinates best

in shaded places. Not until the seedlings are at least a year old will it be safe to transplant them.

Birches may also be propagated by grafting or budding upon seedling stocks of the common kinds. Cion-budding is a good method, but these matters need not be gone into here, as they more concern the nurseryman than the lay gardener or the amateur planter, who will probably turn to the reliable nurseryman for his Birch specimens.

In planting it should be remembered that the cut-leaved varieties, such as the Cut-leaved Weeping Birch (*Betula alba* var. *laciniata*), placed at a distant point of a long narrow border adds light, and gives the semblance of greater distance to the landscape, when standing clear from the other foliage masses.

Then, too, Birches shaded by other trees force themselves into tall tapering growths, but when planted free from congested growth they become bushier in outline. Unlike nearly all other trees Birches are improved by not being allowed their full development. However, they should be pruned sparingly, if at all, and never after their tenth year.

It is a great mistake to plant Birches too lavishly. Their ornamental character requires care and judgment in placing them so as not to "overdo" the landscape. In this let Nature, the great landscape gardener, be your guide. Against an evergreen background she places a few Birches, in a copse of underbrush a sprightly sentinel or two, at the bend of a stream a group of pendulous branched ones, becoming more liberal when the gray hillside is to be enlivened, or the dark forest lightened. The ingenuity of man (which has devised more animal-like forms for the Yew and Box than ever Noah dreamed of in his Ark or philosophy), has likewise expended itself on the Birch, in consequence of which the garden-maker will find several varieties semi-artificial in growth-form that will fit in with the scheme of formal gardens and formal landscape, such as certain weeping varieties of the European White Birch (*Betula alba*).

Our woods throughout the country produce so many Birches whose species are mainly distinguished by the peculiar differences in color and texture of their bark that the following notes should serve as an identification guide to everyone, while the landscape characteristics of these Birches may lead the enthusiastic woodland explorer to transplant some of the seedlings he may find to spots on the home grounds, if, in advance, he can have some idea of the particular relation of Birches to what one may call the door-yard landscape.

1. American White Birch—(*Betula populifolia*)

Bark: Chalky grayish white, close-fitting, which does not peel off with age, nor does the chalk rub off, as it does from the bark of the Canoe Birch (*Betula papyrifera*). The under bark is yellowish.

Foliage: Mass generally thin and light, and suggests that of the Poplar and the Aspen. Leaves smooth and glossy, yellow in autumn.

Soil: Prefers dry barren sandy soil of old fields and rocky woods, and thrives where other trees would die.

Landscape Features: For roadsides, edges of swamps, etc., 25 to 50 feet high, rapid growth. Good nursery specimens, well rooted, 4 to 6 feet, may be had for about fifty cents each; 6 to 8 feet, for about seventy-five cents each.

2. Canoe Birch—(*Betula papyrifera*)

Bark: Very white, splits into thin layers. Powdery surface rubs off. Thus distinguished from American White Birch (*Betula populifolia*).

Foliage: Thicker than that of the American White Birch, but otherwise much the same. In this respect these two trees are often confused. Large leaves, yellow in autumn.

Soil: Prefers river banks and rich loamy mountain and hill slopes. Easily transplanted.

Landscape Features: Edge of ponds, riverside, hillside, 60 to 80 feet high, rapid and vigorous growth. Especially picturesque and graceful. Good nursery specimens, well rooted, 6 to 8 feet, may be had for about one dollar; 8 to 10 feet, for about one dollar and fifty cents each.

3. Yellow Birch—(*Betula lutea*)

Bark: Yellowish silver gray; rolls back and peels off in thin filmy strips from trunk. This fringed and tattered bark reveals gleams of golden-colored inner bark.

(*Continued on page* xiv)

The Cut-leaved Weeping Birch is much prized for landscape effects

The Weeping Birch (*Betula alba* var. *pendula Youngi*)

The European White Birch is too rarely met with on American lawns

Keep the wall covering in subdued design or solid color, and balance the pictures for each wall space in a group

Wall papers of strong contrast distract the eye from almost any type of pictures and are better without them

The Art of Hanging Pictures

SIMPLE PRINCIPLES GOVERNING THE FRAMING, BACKGROUNDS, GROUPING AND SELECTION OF PICTURES FOR THE WALLS OF THE HOME — WHAT TO SEEK AND WHAT TO AVOID

BY SHERRIL SCHELL

Photographs by J. T. Beals, the author and others

THE most important factor in the decorative treatment of walls is the wall covering, for without the right kind of background the most carefully thought out scheme of picture grouping will prove unavailing. Nothing can so dispel the harmony of an otherwise agreeable room as an unsuitable wall paper; the most enchanting pictures appeal in vain and only succeed in arousing one's irritation if the walls are out of tune. The rooms we use most, particularly the living-room, should each have a paper whose values are closely related, that is a paper whose colors are not in violent contrast. Best of all is the covering of solid tint of some soft and restful color; this makes the happiest background for all varieties of paintings, prints and photographs.

Green and brown in their softer tones are invariably successful in this capacity, and harmonize readily with the best rugs and furniture. Brown is a gracious color on which to hang etchings, colored prints and photographs. Green makes a pleasing wall covering for oil paintings and water colors and greatly enhances the beauty of gold frames. Some of the new designs in wall paper are decorative enough in themselves without the added embellishment of pictures. This variety of wall covering can be used to the best advantage in bedrooms providing it is of restful pattern. A few pictures can now and then be effectively placed against such a paper, but they should be large, simple in outline and bold in color, if they are to vie with their setting.

As a rule it is better not to place any pictures on a patterned paper of florid design as it creates a confusion of line, and the effect of both pictures and paper is destroyed. First in the decorative scale should come the wall ornamentation, that is, as a rule, pictures. Then should follow after in regular gradation, furniture, walls, floor. When a paper of bold design is used, the background pushes itself into first place and the pictures take on an inferior and false relation in the scheme.

A satisfying grouping of two pictures with a mirror in a formal bedroom

Before there is any attempt at picture grouping it is always best to study each picture carefully to judge whether or not it is worth hanging. We Americans more than any other people have a tendency to overload our walls with such a quantity of pictures that our rooms often suggest the art shop rather than the home. People who travel a great deal err most often in this direction and their walls fairly groan with a multitude of souvenirs, mind-distracting and dust-collecting.

The frame should be selected not only with consideration for its relation to the picture, but also its relation to the room. A frame may be in key with its picture, but its tone may be discordant on certain backgrounds, or, if it is in tune with the background, its design may dissipate the harmonious grouping of the adjacent pictures. The frame should never be of too bright a color nor should it be very ornate in design as it will then distract the eye from its intended interest.

Mats should always be wider than the frame. When two pictures containing mats are hung together it is important that the mats be of similar values and that they be not in contrasting tone to that of the background. Oval pictures often make uncongenial neighbors if they are of different proportions. Bright and dull gold frames should not be hung together as both suffer by close juxtaposition; one becomes dingy and the other garish by this arrangement. Gold frames are usually best for oil paintings, but it

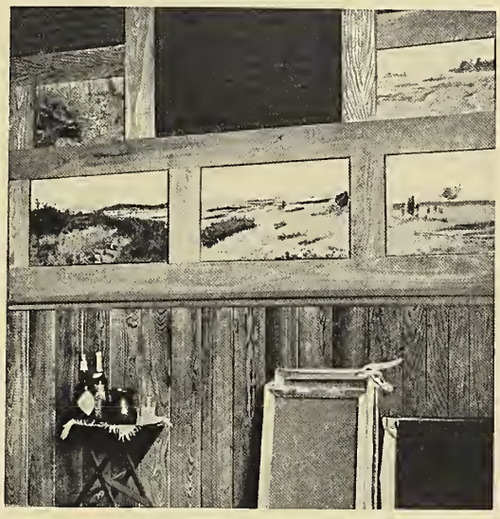
often happens that a black or a dark brown frame will greatly heighten the brilliance of some tones. Another thing that requires caution is the selection of a frame that belongs to some particular period of decoration. One must study the different styles carefully before he attempts to make use of a frame of strongly individual design. In spite of our familiarity with the different French periods, for example, there are to be found not a few who make the mistake of placing some masterpiece of the style of Louis Quinze in an Empire frame.

All pictures should lie close to the wall and should not be tilted forward, as in the latter case a disquieting effect is the result. Whenever it is possible pictures should be fastened to the wall and not be suspended from the molding by wire or cord. Some paintings, however, have such a ponderous appearance, and are so heavy in fact, that it is better to hang them from the molding. In this case the wire should be as unobtrusive as possible. A better effect will be gained by fastening a wire at each end of the frame and carrying them straight to the molding, as the acute angle formed by one wire will not harmonize with the vertical lines of the room. The two wires also keep the frame straight.

The lines and tones of the wall should also be carefully studied before there is any tentative grouping, and the pictures separated in reference to their particular environment. Every picture should be chosen as a factor in the general composition, in its relation not only to the wall but to that of the furniture, floor covering and ornaments A dainty stipple print, for instance, is decidedly out of place in a room filled with heavy Mission furniture and Navajo rugs, as is a drawing of Aubrey Beardsley in the vicinity of an Empire cabinet.

A good way to try different groupings is to lay the pictures chosen for a certain room on the floor, where different combinations can be tried until exactly the right balance is gained. By this plan one will not only save a great deal of time and patience but the wall paper also. Usually the most important picture, not always the largest, should occupy the center and should be the keynote of the group, as one's natural instinct is to look at the middle of the wall for some satisfying ornamentation. The other pictures should radiate from this focus point and the proportion of the grouping should be based on it. Each wall space should be studied as the painter studies his canvas in order to obtain a well balanced composition. The spacing between the different pictures can be decided upon before the pictures are put on the wall. Small pictures should be placed closely together as they appear very trifling when wide spaces intervene. If the detail of a small picture is lost in hanging, it is better to eliminate it altogether, for its meaning is gone. It must be borne in mind that dignity and repose will be unattainable if there are any petty ornaments on the wall or in close proximity.

A better grouping would result if the lower left-hand picture were lowered a trifle or the oval raised



This artist's studio shows an unusual method of framing sketches by the woodwork

Mats should be wider than the frames and not contrasting in tone with the background

The general rule is to so hang a picture that its center comes within easy range of the eye, and whenever possible the wall space of a room should present a unity of proportion in this regard. Often a mantel or a piece of furniture will compel one to place a picture a little higher, but this seldom creates a poor effect. Pictures representing an Ascension, for instance, and many religious subjects, can be placed a trifle higher than others as this emphasizes the idea of worship intended by the artist. Landscapes showing mountain scenery can also be effectively handled in this way. Interior scenes can be placed a little lower than others, as they are better appreciated when one is seated, and are then on a level with the eye. When the pictures are nearly of a size the spaces between them should be equal. The space usually occupied by a mirror over a mantelpiece can be happily filled by a large picture, particularly by an oval one. If a long horizontal picture is used it should always be a trifle shorter than the width of the mantel Oval pictures are often satisfactorily placed against certain striped papers and a particularly striking effect can be gained by a sparing and skilful use of them. Colored prints should not be placed near oil paintings as the difference of treatment destroys the effect of both kinds of pictures.

Some who are clever enough in arranging pictures, frequently make grievous mistakes in grouping them in relation to the furniture and bric-a-brac. In New York we find a house in which the owner had gained an unusually graceful and dignified effect by his skilful grouping of some fine carbon copies of Velasquez's Infantas. His labor was set at nought, however, when for some reason he allowed his rooms to accumulate with framed cards bearing the trite and wearisome maxims of the day.

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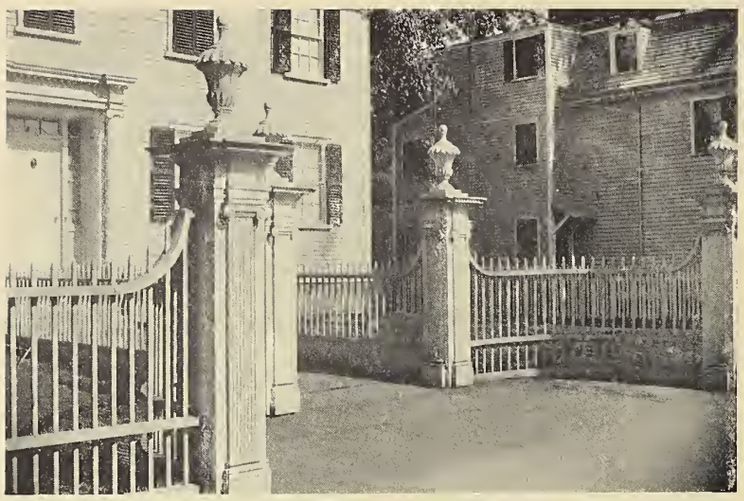


Entrance to the Orm-Ropes House, Salem, which was built 1720 and lately restored admirably

Cragie House, Longfellow's home in Cambridge, has a stately old wooden fence and gateway

Some Old Colonial Gateways

A COLLECTION FROM WELL KNOWN MONUMENTS OF THE PAST, FULL OF HELPFUL SUGGESTION AS TO THE MEANS OF ENSURING HOME PRIVACY

BY JOY WHEELER DOW

Photographs by the author

IT has become fashionable once more to surround one's dwelling place with some sort of fencing, and to have a gateway. But that is not the true reason why gateways and fences have been recently growing into general favor. There are other underlying causes, of far greater influence than any transitory fashion.

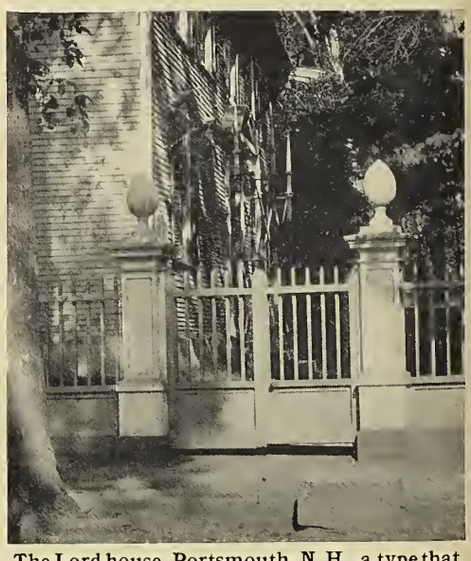
During the middle part of the last century a great deal of money was little better than wasted upon fences and gateways because the fences were not intended for protection half as much as they were for looks; and as for esthetic excellence, they had none at all. When, at last, their uselessness was condemned on the two counts, long about 1880, the fences began to be pulled down, and in their place came unobstructed stretches of greensward that a newly invented toy—the lawn-mower—might have full play. The American people at that time had no shame about living in evidence, as one might call it; they cared little or nothing for privacy about their houses.

A fence and gateway enclosing a humble and very limited cottage setting, with the aim merely of keeping people out, would seem as useless and unnecessary an expense as it did in 1880, only for a new condition—new to America—which has lately arisen, namely, a plea for a little home privacy.

Whoever believes in the beautiful metaphor—I have forgotten with whom it originated or I should give the author due credit—that a man's home is the sacred refuge of his life, has the key to the situation. It is not the despoiler of our shrubbery or our architecture who needs

This gateway to an old Middletown, Conn., home is a restoration

A modern Providence, R. I., gateway that has the old-time flavor



The Lord house, Portsmouth, N. H., a type that could be inexpensively duplicated

Why do we so seldom find modern gateways with the charm of this old Hingham one?

The imposing gateway of the Brown estate, Providence, bears marble busts of the family's founders

Such gateways as this York, Me., example are very rare—you may find but one in a town

to be guarded against by a fence and gateway, but simply the public gaze, for how can there be a sacred refuge anywhere if this is to be always and unreservedly admitted, and how can there be any true home feeling without that necessary sense of privacy—gained only by a fence with architectural merit or a hedge?

But the true home feeling—the Anglo-Saxon home feeling—has been gaining adherents rapidly of late in this country, and with it we gain a very much better sense of the esthetic in fences and gateways than was even possible in the preceding age—a commercial age, a shopkeeper's age, let us term it,—of ostentatious rivalry and display, the motto of which was to give the showcase a chance at the sidewalk. True, it was not always as bad as this in our land. The commercial idea in America dates from the administration of Andrew Jackson, otherwise, we should have no legitimate prototypes from which to draw inspiration. My contention is that in order to erect a gateway which will be really adequate for all the needs of the house-builder of to-day, we must first consult American history at a time when the fence and gateway were in fashion, of course, but where they had the truer dual mission in the world—the sense of home-privacy first to express, and next, the architectural appreciation of the builder.

I would not like anyone to suppose, though, that examples of good, historic gateways are so common in our land that all one has to do is to take a day's outing, and spend it pointing his camera at gateways hit or miss. For the present collection represents the bulk of five years of patient work.

The gateway at Middletown, Conn., is a reproduction by a modern architect, very skilfully evolved, and attuned to its surroundings. There will usually be found but one gateway the equal of this in a whole New England town. Providence is an exception. It has four or five remarkably beautiful examples. The Perry house terrace gateway at Providence is modern, and while exceptionally good in detail, is disappointing in design, at least so far as the arch is concerned.

What we must insist upon is a gateway that shall reflect and express privacy, protection and beauty for us. Ordinary hand-me-down gateways, with neither romance nor mystery nor traditions in their make-up, will not do.

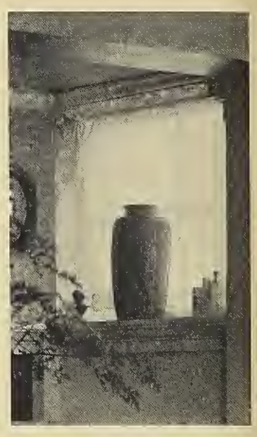
Gateways and fences such as these are by no means inexpensive. Delicately carved and molded woodwork usually does cost money. The question is, however, can we feel the full significance of home life without this combined protection and embellishment. Let us have our fences and gateways, and let us have them in keeping, even if the house itself must be a trifle smaller or of less costly materials, or the land a bit less in extent.

Providence, R. I., is exceptionally rich in its noteworthy old gateways

A mere gateway is not enough; it must have good architecture back of it

This charming old gateway with its graceful urns is at Bedford, Mass.

The Vase in the Home



THE WONDERFUL IMPROVEMENT IN DESIGN, COLORING AND REFINEMENT THAT IS NOTICEABLE IN THE POTTERY BOWL OR JAR, THE GLASS FLOWER RECEPTACLE, THE JARDINIÈRE

BY KATHERINE POPE

Photographs by J. Mitchell Elliot and others

HIDEOUS indeed were our vases of but a few years back, beautiful indeed are many of those of the present day. We lately loitered in the art rooms of a famous dealer, and there studied various exquisite forms, studied them near at hand, and also viewed them from a distance; the while getting realization of their part in the beauty of a home.

And we found that even in this expensive day, this "dear" land, one can procure really good vases and jars at expenditure of only a modest sum. The combination of beauty and simplicity we, alas, had too often found of a prohibitive costliness, but in the way of vase and jar they are offering to-day some really good cheap things. We have in mind an inexpensive pottery of simple, classic forms, the color a shade of green reposeful and exquisite, the finish a satiny smoothness. And we have in mind a still lower priced pottery, honest, artistic, a rough green surface, the shapes harmonious with the general intent of vase and bowl.

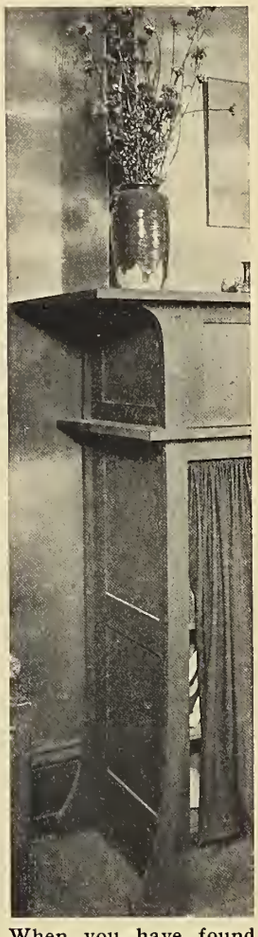
The vases and jars of these illustrations of modern pottery are usable; their unobtrusiveness, the lovely green of the one, the retiring brown-mottled green of the other, just the setting needed to bring out the beauty of blossom and branch. In the silky sleek pottery burnished autumn leaves seem very much at home, a low bowl of the rough green seems fashioned on purpose for the sturdier of our field flowers—golden-rod and frost daisies and white and purple asters. And speaking of the right receptacle for sturdy wild growths, did you ever see one of those black-brown Indian jars holding a wealth of golden-rod? The brown-black contrasts splendidly with the yellow of the weed, the bold curves of the pottery stand out strong below the great sheaf of field beauty.

Some vases are meant for utilitarian purposes, some should have asked of them no service save to stand alone in their beauty—it being full excuse for their being. One of the vases we studied, a vase from the pottery regarded as the glory of American ceramic art, it would have been sacrilege to lessen by placing therein distracting flower and leaf. It was a fairly large jar, the shape simple and graceful. The form was attractive, but the coloring! An iris-colored background, that indescribable purplish-gray; the only decoration, two swirling bronze peacock feathers.

We are well aware that the Japanese of late years have imposed on us to a degree, sent to the American markets—and European too—hideous, inartistic, impossible things. And they can produce such beautiful wares so cheaply. Let us hope the wily Oriental ere long will realize he has gone too far, will cease offering us the garish products of his land, give us more of simple beauty. Now only here and there are to be had good examples of Japanese art, among these a few vases that furnish illustration of the national worship of beauty.

Though their bad things are very, very bad, their good things are very, very good. And in their flower receptacles they have been such true artists, realizing, as we did not until recently, that a vase must be subordinate to the blossom it holds. As a rule, flower vases are better without special decoration, and the Japanese at his best can give us a variety of this sort—forms of classic simplicity; what decoration there is, irregular and indefinite; the vase colors, those that intensify flower beauty—greens and browns, neutral grays, yellows, and blues.

In looking for really good Japanese vases you will probably find what you want in the obscure shop rather than the much exploited "Japanese department." We one day bought at a tiny Jap place a lovely little flower-jar for half a dollar, the coloring soft blue-gray, soft green, brown and white-gray, the vase unglazed, the design indistinct figures, one losing itself in another—the effect as a whole, blue-gray and white. The little vase was shapely, the subdued color beautiful—it has proven just right for flowers of many seasons, many kinds.



When you have found a suitable vase make it serve as a flower receptacle

Formerly, coloring in vases accessible to the average person, was garish, obtrusive; in addition to the simple forms preferred to-day, soft tones are to the fore, "grave and subdued color." In pottery uniform color is liked, but monotony avoided by range of hues, mayhap dark slate gray melting into mellow blues and violets. A rough green surface will show streaked and speckled, more pleasing than the unbroken color, giving light and shade. There are changeable sea-greens, there are dark reds melting into warm browns.

And as to indicate the taste of the day, decoration is suggested rather than boldly outlined; in one class of pottery, flower and leaf are beautifully indistinct in color and form, seem to melt back into the background, seem hesitatingly to emerge therefrom, a very part of the vase—not something stuck on, obviously "decoration." The backgrounds also are never emphatic, buffs and browns and blues of such softness one scarce knows whether to name them buffs and browns and blues.

Another illustration of decoration softly emerging from background is seen in a vase of bluish-green whereon purple berries and a leafless branch are suggested. Quiet in color and of a loveliness, are white chrysanthemums out of a pale lavender background. Not only do the admired Japanese vases show beautiful blue-gray and white-gray harmonies, but one of our American potteries is widely known for its use of grayish-white and subdued blue. Another soft and pleasing conjoining of tones is seen in vases of dark gray and dull green.

The wonderfully beautiful iridescent and opalescent glass of the day should be given its full value, all the evanescent color be searched for and revealed. Do not place therein water or posies, let vase or jar

(*Continued on page* x)

Propagating the Gladiolus

HOW YOU MAY SECURE HUNDREDS OF FLOWERING BULBS FOR YOUR GARDEN WITH THE EXPENDITURE OF A LITTLE TIME, SPACE, AND PERHAPS A DOLLAR

BY ROYDEN E. TULL

THAT the Gladiolus is one of the most beautiful of our summer-flowering bulbs every one knows, producing for us, as it does, every variety of shade and color combination. What few realize is the fact that Gladioli can be propagated as easily as the potato, and with no more trouble in the matter of winter storage.

The writer had not been able to have all of these bulbs he wished until recently, for with the coming of every spring there were always so many things in the way of fruits, vegetables, shrubs, etc., he thought he must have, that the money he had allotted to the garden was exhausted before the matter of having any left for the Gladioli was thought of. That is all changed now, and he finds he can have his garden full of Gladioli, after all, at comparatively little expense, with a little work and a little patience. This is the way it is accomplished:

Some of the seedsmen offer for sale at about one dollar per thousand the little one-year-old bulblets that need another season's growth to produce mature flowering corms. One thousand of such bulblets will produce from seven to nine hundred mature flowering bulbs.

If you have not been able to save all of the little bulbs you think you will need by a method described later in this article, order your additional supply from your seedsman early in February, and instruct him to ship these bulblets to you as soon as danger from frost is past. Do this with all your seeds, plants, and bulbs and the resulting increase in both the quantity and quality of the goods you get will be a revelation in prolific results. Most persons wait till the rush of planting time comes before they order, and then cannot understand why some things have been damaged in packing or shipping.

The Gladiolus will give you the greatest variety of color among bulbs. Home propagation will secure for you hundreds of blooms

As early in spring as the ground can be worked nicely, and as soon as all danger from a heavy frost is past, prepare your seedbed as you would prepare it for onion sets. Your infant Gladioli should be set out just as you would onion sets except that the rows must be from eighteen to twenty-four inches apart, and that the bulbs must be placed at least two inches deep, and not more than half an inch apart in the row. Tend them carefully all summer, keeping all the weeds out.

After the first heavy frost in the fall take up your bulbs and put them in trays to dry, leaving the tops on until they are thoroughly dried, when they should be cut off about one inch above the bulb. Next sack them carefully, using a Number 3 or a Number 4 paper bag (such as those in which sugar comes from the grocer's), and putting two or three dozen bulbs in each bag. Tie the neck of the bags tightly, leaving a surplus of cord from which a loop should be made by which the bag is suspended from a nail in the rafters of the vegetable cellar. There they are to be left until spring. Great care must be taken during these latter stages to prevent bruising; every bruise means a rotted bulb in consequence.

It is at the base of these larger bulbs that the bulblets grow. A two-year-old bulb has clustering around it a large number of the smaller ones, sometimes from thirty-five to fifty. If you have grown Galdioli previously it will not be necessary for you to buy the small bulbs as you may save those adhering to the bulbs which have flowered the last season. Remove the bulblets, place in separate trays, and as soon as they are dry store them just as you did the larger ones except that two or three hundred are put in each bag. It is not advisable to put a larger number in a bag as they are apt to pack and heat, thus losing their vitality. Care and patience are necessary if you would save all of these little bulbs at harvest time on account of their small size and the fact that they do not adhere to the parent bulb very firmly.

By this method, of course only existing varieties may be perpetuated. If one desires to carry his experiments farther afield and into the fascinating realm of hybridization, he may buy seeds from the seedsmen or may carry pollen from one plant to another in his own garden by means of a camel's hair or red sable brush. It will, however, be necessary to wait an additional year for blossoms from seed.

After the seed has been secured, and about the early part of March, prepare flats as you would for any other delicate seedling. Plant the seed in rows, cover with about one-sixteenth of an inch of potting soil. Then cover each flat with a pane of glass until germination has taken place, after which remove the glass and place the flats in the full sunlight, taking care, however, to keep the temperature at about 70° during the day and 55° at night.

When the second pair of leaves appears, prick out into the greenhouse bench or coldframe and transplant to nursery rows as soon as conditions out-of-doors are favorable.

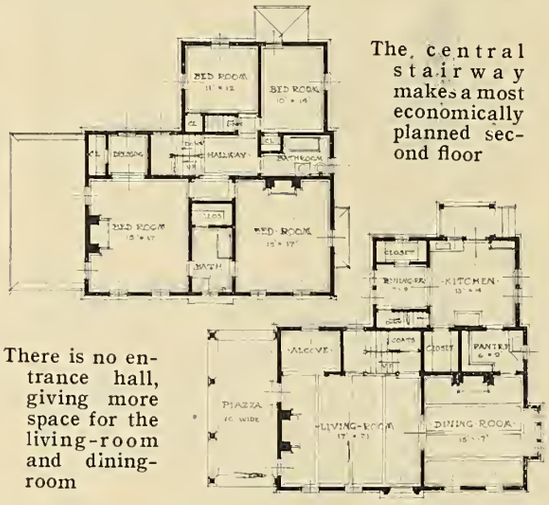
In the fall treat the seedlings as you did the bulblets, planting them in nursery rows the second season. They will flower the third season and may be set out in your regular beds at that time unless you object to an indiscriminate riot of color in contrasting shades. In that case plant again in nursery rows and label each bulb as it blooms.

A good way to do this is to group the crimsons, scarlets, pinks, etc., numbering the different groups "1", "2", "3", etc.,putting a label with the number of the group to which it belongs opposite each bulb. In the fall they can be placed in bags and the bags numbered to correspond. Of course any especially desirable bulb may have a distinctive mark and name and kept separate.

The Gladiolus is one of the most useful perennials for fine color effects. You may have the Salem for salmon pink, the Augusta for pure white, the Madame Monneret for delicate rose, the Nezinscott for bright scarlet, the Sellew for crimson, the Canary Bird for yellow, and so on through almost every shade.

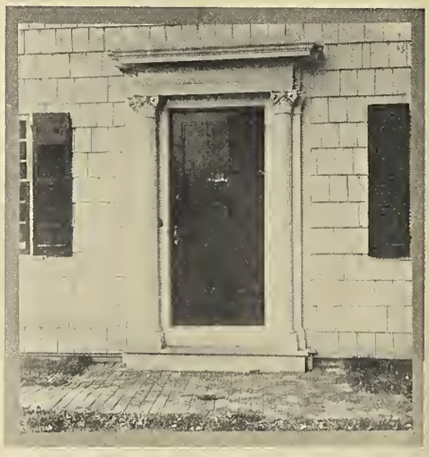
White-painted shingles have been chosen for the wall material, with blinds in green. It would be hard to imagine a better combination to go with the white birches

On account of the sloping site the cellar is lighted entirely from the rear, allowing the house to set low into the ground



The central stairway makes a most economically planned second floor

There is no entrance hall, giving more space for the living-room and dining-room



The delicately carved Corinthian columns and pilasters make a charming front entrance

Aymar Embury, II., architect

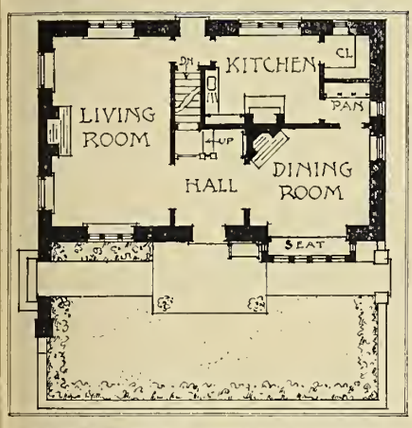
Rough plaster, tinted and the dark-stained simple woodwork characterize the whole first story

In the dining-room the side windows are set out above the chair-rail level, giving a broad shelf for house plants

THE HOME OF LOUIS STARR, Jr., TENAFLY, N. J.

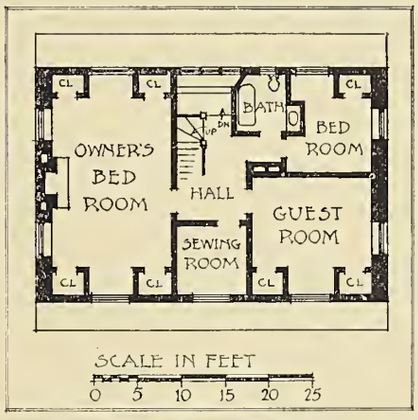
The steeply pitched roof comes well down over the first-story windows, and is broken by the distinctive casement dormers

The ivy-covered stone end faces the street. At the left is the rear entrance, the front being secluded by the gateway



Only the essential rooms are included in the first story, for the house is but 25 x 40 feet

From every view-point the house is picturesque and eminently homelike. For its size it is undoubtedly one of the most attractive bits of domestic architecture in America

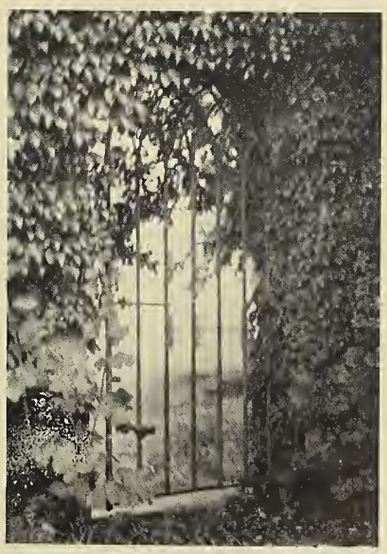


Abundant closet space is provided in the slope of the roof between the dormers

"PRINCESSGATE"

Joy Wheeler Dow, architect

A view of "Princessgate" somewhat similar to that used as a cover on the Christmas number



At the end of a row of hollyhocks stands the vine-grown iron gateway

The wide eaves and the projection of one stone end containing the gateway shield the terrace

THE HOME OF ELDRED BATES, WYOMING, N. J.

Inside the House

Edited by Margaret Greenleaf

Miss Greenleaf will gladly answer queries pertaining to individual problems of interior decoration and furnishing. When an immediate reply is desired, please enclose a self-addressed envelope

As to Holiday Gifts

WITH the holidays passed and the new year begun comes the comfortable realization that we are settled in our homes for the winter season, and accordingly we adjust ourselves and our belongings and set our backgrounds to obtain the best effects.

There is to-day a decided tendency in gift making to select ornaments, furniture or rugs for the house, rather than the more personal things which long precedent had established, and many of us are just now endeavoring to find places for the recent acquisitions which have come to us with the Christmas season. This requires study and possibly some decorative changes, and unfortunately, alas! occasionally the absolute necessity of relegating an expensive but ornate vase, aggressive brass lamp, or other things of this ilk to the topmost shelf of the china-closet. This experience points to a fact which it would be well for the gift-making public to realize, namely, if one be moved to give decorative bits or pieces of furniture it is absolutely essential that they be familiar with the style of the house into which these will go, and also with the taste of the recipient, otherwise it is far wiser and more kind not to go into this field in making the present.

Table Lamps and Shades

YOU are fortunate if you have received among your holiday gifts a lamp for the living-room or library table. They and their shades are very important factors in the furnishing. It is, of course, of the utmost importance that they fit into the general scheme of the room, both as to design and coloring. Even if you did not receive a whole lamp, perhaps a large dull-glazed pottery jar came your way. If you already are well supplied with such receptacles for flower-holders, consider the possibility of using the jar as a base for a lamp. It is a simple matter to select or have made an oil-fount to fit into it, and shades may always be independently acquired.

Cover the Water Tank

LIKE many others we have a tank in our house which is supplied from the city water. The pipe which led down from it became stopped up, and upon investigation we discovered the cause. It had been stopped up by rags, probably dropped in the tank by mice. Our plumber's bill was large, as the rags were difficult to get out. I made a cover at small expense, and this not only prevents a similar occurrence, but prevents dust also from going in the tank. C. K F.

Unruly Doors

FEW things are more annoying about the house than a door which will not stay latched when closed. If you examine such a door you will usually find that it has shrunk. Take the door off its hinges, and then take the part of the hinge on the door frame off, and place enough pasteboard back of it to make up for the shrinkage. Replace the hinges, using slightly longer screws. Or else remove the plate in the door frame that the latch and lock fit into, and put some material back of it to bring the plate nearer the door. The writer has used both methods with the best of success. If the door sticks on the "saddle" on the lower edge, before planing it off be sure the hinges have not worn off, and so allowed the door to drop down. If so, replace them, and so do not injure the door. If the door has sunk lower than when put up, and so will not lock, or latch, you can often remedy this by taking off the plate on the door frame and filing the plate. Too much "side play" can be taken up by filing. C. K. F.

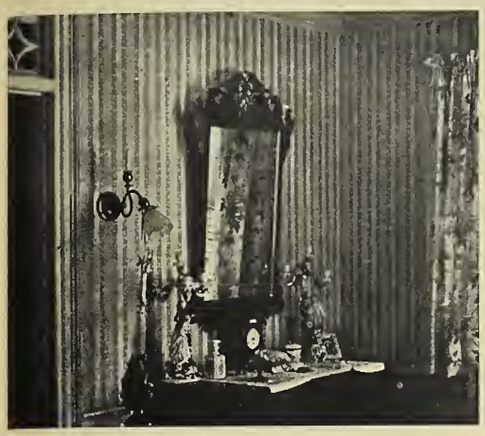
Utilize surplus pottery jars as lamp bases, having an oil-fount made to fit

Small Oriental Rugs

IT is becoming more and more common to discover among one's holiday gifts a small Oriental rug or two. They are among the most welcome of all gifts for the reason that they fit so acceptably into the furnishing scheme of almost any room. Even if they do not find a place on the floor, which is unlikely, they may be useful for covering the heavier cushions at the ends of long davenports and window-seats, or even for covering hassocks. That of course would seem a desecration for Orientals of really excellent individual merits, many of which are splendid wall decorations when hung.

Lighting Fixtures

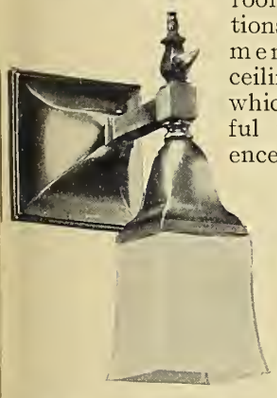
WHEN the time comes to decide upon the lighting fixtures for the new house there are many points upon which the amateur should inform himself. To-day the combination fixture appears only occasionally; that is, there will be usually but one or two combination



A combination gas and electric side-wall lighting fixture of simple design

fixtures used in each room. These can be extremely ugly and impossible to reconcile with any decorative scheme, but it is possible also to obtain them with the gas fixture so discreetly arranged that it is not obtrusive. For instance, in a dining-room, if there is a central table light under a spreading shade there should be no effort to introduce a gas light in this fixture, but the sconces or side lights used may have a single gas light included in the design. It is easier in the side lights to disguise these than in the central light, and in living-rooms, unless the type of the room really requires it, it is much better to avoid a central light, using standard table lights and side lights exclusively.

Many of the large manufacturers of lighting fixtures have show rooms in the larger cities where one can see the fixtures set up in the proper environment for each style. Many of these exhibition rooms carry suggestions in wall treatment, woodwork, ceiling and draperies which are very helpful to the inexperienced along the lines of house decoration. While undecorated walls of plain color and standing woodwork of simple lines seem to call for fixtures and hardware of iron, dull copper or smoked brass, the heavy dark woodwork and richly ornamented ceiling and tapestried walls of the Flemish or Italian Renaissance will carry fixtures of ornamental brass, carved and gilded wood, or of brass treated with the sand blast, which gives to the metal an antique and roughened surface which is very effective. The designs of such pieces are appropriately characteristic of the period along which the room is planned. In the Colonial room the setting will show ivory enamel for the woodwork and some one of the delightful wall coverings of that period, and, to be properly complemented, brass fixtures of simple design or those of gilded metal and crystal, or the less ornate type of carved and gilded wood should be used.



The gas outlet is kept as inconspicuous as possible

As it is not always possible for the prospective builder to visit such show rooms much may be done through correspondence with a city decorator or by writing directly to the manufacturers, giving a description of the individual requirements of the house and requesting a suitable selection of illustrations showing designs. In most cases these will be supplied, together with prices, and in this way fixtures appropriate to the room may be secured without great difficulty.

Decorating a Dining-room

KNOWING of the assistance this department of House & Garden has given others, as a constant reader and subscriber I am coming to you for personal help in selecting wall papers and curtains for my dining-room. The room is 21 ft. long and 13 ft. wide, with three windows in the east. The frame is 9 ft. in width and holds four small windows on the north. I think I would like tapestry paper with no predominating color on the side walls, but you may think this not so good as some other treatment would be. Please tell me just how you think the wall would look best?

I wish to have the woodwork white enamel, or perhaps an ivory white. Kindly suggest the best material for this? The rug has Oriental coloring in which there is much dull blue, and tan. The furniture is oak. There is a single door leading into the living-room, the walls of which are treated in a light shade of green. The house is very simple, nothing expensive in it, and I do not want to buy costly paper now, but it must be in good taste. The four windows on the north are set 4 ft. from the floor and have no shades. I had white net sill-length curtains at all of the windows. The light has faded my paper, and I must make a different arrangement. Window shades do not look well as I have tried them, and have not felt that they were a success. Perhaps you could suggest some sort of curtains for the inside which could be drawn and shut out the light. I would appreciate it if you could send me samples of wall paper and drapery material. Also samples of the curtain material you would recommend, and some suggestion as to the length and general style of these curtains.

We are very pleased to supply you with the suggestions for the treatment of your dining-room as described. We have mailed to you a sample of wall paper showing a design of fruit and flowers in old rose, green, and dull blue on a tan ground, with a thread of gold running through it. We send also a sample of raw silk which we would suggest for your window draperies. These can be made to slip loosely on a rod and extend only to the sill line. They will draw readily and in a great measure shut

A plain or two-toned upper wall treatment would greatly improve this dining-room

out the light and probably you will find them of service in the place of shades.

The silk is 30 inches in width and the price is $1.50 a yard. It is, however, very durable and holds its color well. The price of the paper is 45 cents a roll of 8 yards. We also send a sample of tapestry fabric which is similar in color and design to the wall paper. This we would recommend your using for seat cushions of your chairs and a window-seat, should such be required. The design of the tapestry paper is quiet, as the tones are extremely soft and dull and in some lights it presents practically a two-toned surface.

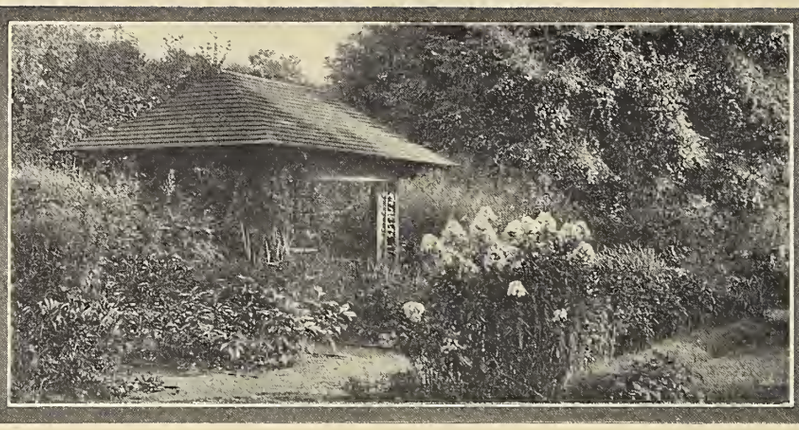
Ivory white enamel is recommended for your woodwork as this will be most effective with the wall treatment suggested.

For door curtains dull old red velvet —or dull blue could be used. There is a cotton velvet, sold under the name of Brunswick, which takes the light beautifully when hanging in folds; this is 50 inches wide and sells for $2.25 a yard and comes in a fine selection of colors. It makes most serviceable and attractive curtains and we would recommend that you use it in your doorway.

In making these curtains two lengths of the velvet should be put together without interlining, finishing the edge with a gimp or galloon in color similar to the velvet, or the edges may be finished instead with a narrow moss fringe.

Too many ornaments on this mantel spoil the room. Do not be afraid to store ornaments

Garden Suggestions and Queries



Edited By Gardner Teall

The Editor will be glad to answer in these columns queries that appear of general interest pertaining to individual problems connected with the garden and grounds. When a direct personal reply is desired, please enclose a self-addressed stamped envelope.

St. Valentine's Month

ST. VALENTINE chose rather a chilly month when he selected February for his festival, yet for these twenty-eight days the good old Zodiac is ruled by the Heart, and that gives the world something to think about when Winter, still clinging with its snows, seems to bid the enthusiastic Garden-maker be patient and await the real coming of Springtime. However, February is not a month to be idle in; there are more preparations to be made and more things to be done in this month than, perhaps, your young gardener about to enter upon his experiences has ever dreamed there could be. Here are some of them:

February Preparations

Don't forget that you may have some spraying to do in February.

Hotbeds will hardly be started as early as February in parts of the country north of Philadelphia, surely not near Chicago, Detroit or New York.

If you are intending to start a Mushroom crop you have no time to lose now.

Achimenes tubers should now be started in flats, in light soil, with leaf mold and sand, and sheep manure to enrich it. A temperature of 60 degrees will be required at night.

The Achimenes is one of the most striking summer-blooming conservatory or window-plants.

Cuttings may now be taken for Paris Daisies, Chrysanthemums, and Begonias for October and later flowering. It would be well to buy small greenhouse plants at this time to be grown through the summer to maturity.

If you are digging around your garden at any time remember that dug-in snow chills the soil where roots may be dormant, consequently they will be injured or killed by thoughtless treatment of this sort.

Don't forget that your lawn needs winter care. Top dress it with fine manure.

Both Gladioli and Cosmos may be started indoors now for early bloom, and bedding plants propagated from stock plants.

Place your orders early with your nurseryman if you would avoid disappointment in the rush for good plants that always seems coincident with the beginning of every season's rush work.

If you procure your seeds in time you will have an opportunity of testing their germinating qualities before the regular outdoor planting season.

This is a good time to put greenhouse benches in shape, for nothing is more discouraging than to find them rotting away. Spray them with copper sulphate, and after that as often as necessary with your whitewash mixture.

For early vegetables start beets, cauliflower, string beans, kohlrabi, etc., in greenhouse or window for later transference to hotbeds and coldframes.

Now is the time to take cuttings of your Stevia (*Piqueria trinervia*), or as soon as it is through its Christmas flowering. From time to time shift them until they are ready for 6-inch pots. Then plunge them outdoors in ashes when all danger of frost is past, turning the pots every day to keep them from rooting into the ground. Induce a bush form by pinching out the growths. Store the plants in a light cool place as cold weather comes on, and bring a few of them at a time into the flower room. Thus, in succession you will have the Stevia for November, December and January.

Inspect your house-plants, especially palms and ferns, and if you find their roots greatly grown and spread, shift them to larger pots.

Among the indoor vegetable seeds you will be sowing in February for outdoor transfer in May are lettuce, tomatoes, cabbage, eggplant, celery, onion, endive, radishes, parsley, etc.

Flowering Tree-twigs

THERE is a sort of indoor gardening that February and the early spring months bring around to everyone who initiates himself in the delightful pastime of forcing the twigs of flowering trees and shrubs into early bloom by cutting them and placing them in vases of water indoors.

There is a very long list of the twigs and branches that thus may be coaxed into flowering weeks and weeks before Nature, left to her own devices, awakens them to the song of the real Springtime.

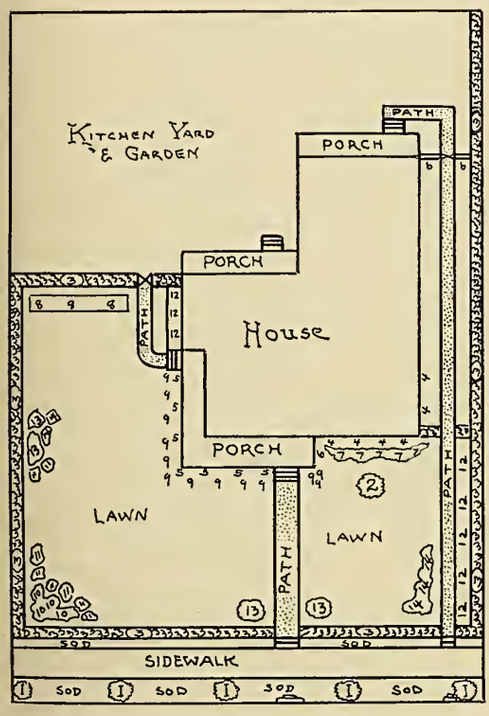
Branches of the Dogwood (*Cornus florida*) bring forth beautiful white flowers several inches wide

There are the branches of the fruit trees—Cherry, Pear, Plum, Apple and Currant; of the nut trees—Almond, Chestnut and Beech; and the Dogwood, Willow, Poplar, Magnolia, Alder, Elm, Rose Briar, Rhododendron, Sweet Briar, and so on down the list.

Be sure, when cutting twigs in forest or in orchard, that it is done with a clean, slanting cut, and when cutting twigs and branches from fruit trees, that those are selected which present full round buds. Such buds are the flower buds and will blossom while the other and more pointed ones are leaf buds which, in many instances, do not come forth until after flowering time.

It is best to soak the twigs in lukewarm water before putting their stems into the vases of water. After that change the water every other day at least and keep the twigs and branches as free from dust as possible by dipping or spraying them daily. A piece of charcoal in each vase of water will keep the water from souring.

You will find the "Pussy" Willow the most easily forced, but you will have little trouble with Dogwood,—the most beautiful of all, with its white Clematis-like flowers—with Laurel, or any of the cultivated shrubs such as Forsythia, Flowering Almond, Japan Quince. The Red Maple, too, is one of the most easily forced twigs and one of the most beautiful in effect.



Shrubs and Vines for a Lawn

OUR house sets in a lot around the front of which we have a beautiful hedge and across the street front of which are five maples as indicated on accompanying diagram. The foundation is rough Dunville stone and quite high. What vines and shrubs would you suggest for beautifying the lot and where should they be placed?

Cherry branches forced in water will produce a profusion of lovely blossoms

Correspondents should always give dimensions of lawn areas, and also indicate especially shaded parts of the lawn. The accompanying diagram, however, may prove helpful. The key thereto is as follows:

1 Maples
2 Weeping Birch (*Betula alba* var. *pendula*)
3 Hedge
4 Boston Ivy (*Ampelopsis tricuspidata*)
5 Clematis (*C. paniculata*)
6 Crimson Rambler
7 Japanese Barberry (*Berberis Thunbergii*)
8 Hardy Perennials
9 Hardy Hydrangeas
10 Pearl Bush (*Exochorda grandiflora*)
11 Spirea (*S. Bumalda* var. *A. Waterer*)
12 Gladioli
13 Snowball (*Viburnum plicatum* var. *tomentosum*)
14 Weigela (*Diervilla hybrida* var. *Eva Rathke*)

The number of specimens required will, of course, depend upon the dimensions of your lawn.

Watering Flowering Plants in Pots

MANY who have the care of window plants seem to imagine that the operation of watering is one of the simplest items incident to their care, and will hardly think it necessary that we should draw attention to this matter, and yet we may safely assert that more plants are injured, and more fail to reach their greatest perfection from an improper mode of watering than from all other causes combined.

To water the various plants, that their different wants shall all be supplied and no more, is an art acquired by but few, and the credit which most cultivators receive for a fine collection of plants is often due to the proper observance of this one item.

It should be borne in mind that the duty of the water is to dissolve and convey to the roots of the plants the food which they need; some plants must have a season of comparative rest, and if such are watered liberally during this time they will keep on growing, and the necessary rest is not obtained. Sometimes growers will tell us that they succeed very well with certain classes of plants such as Fuchsias, etc., but that they fail with other sorts. We at once set such people down as being profuse waterers, who, by too much water, injure or destroy such plants as will not bear it. On the other hand, there are those who fail with this class of plants and succeed well with others, because their mode of watering does not supply enough for the wants of one class, but is about the proper amount for another.

Many plants are permanently injured by water remaining in the saucer; others often suffer from a bad selection of the soil. Some amateurs fail with a certain class of plants, of which Begonias may be taken as a type, because they shower the leaves with cold water, but for this very reason they are eminently successful with another class, of which the Camellia will serve as a type. As a general rule, from which there are few variations, the texture of the leaves may be taken as an index of their power to resist the application of water. Plants having porous, open, or fleshy leaves covered with soft down should be seldom, if ever, moistened, while those having glossy or hard leaves will do all the better if washed frequently.

W. R. Gilbert.

Repotting Ferns and Palms

WILL you please tell me what to do with several of my ferns and palms? They seem to be in good condition but do not make any new growth. I have been told by a neighbor that I ought to repot them immediately, but I would like your advice.

Neighbors very often give useful advice, but in this instance it appears that you have done well to hesitate about taking it. Your plants should not be repotted, at least not before the early part of May. They are "resting," and any meddling with them now is apt to be attended by a loss of the plants. Many persons forget that plants, like people, need times of rest. You can't expect your canary to sing incessantly, nor should you expect your plants to grow incessantly. Nearly every plant needs these resting spells, and so, as your plants seem healthy, do not become impatient because they have not the energies of Jack's phenomenal beanstalk.

Storing Apples and Potatoes

I FIND that we have great trouble in keeping potatoes and apples in the same room in our cellar. Will House & Garden please tell us the difficulty? Our cellar walls seem well built.

The temperature required by potatoes is probably the cause of your apples decaying. Potatoes require about 40° while apples do not nced but about 32°. Therefore it is next to impossible to keep both in the same room without discouraging results.

The Hotbed

EVERY beginner wishes to begin just as soon as possible—and so, because a hotbed will advance the season anywhere from two months to ten weeks and because the last of February is the time to build hotbeds, it seems a very appropriate time for the beginner to learn how to make and manage one. There is absolutely no trick in it; plain, simple directions, plainly and simply followed, will bring, even to the greenest and most untried, success—so proceed without misgivings.

A hotbed is really a forcing house on a very small scale—a place where plants are grown out of season by means of heat artificially supplied. This heat may be carried underneath the bed by steam or hot water pipes, but that is the bothersome and expensive way; or it may be furnished by placing the bed upon a mound of fermenting manure. This is the easiest way.

Fresh manure from the stables of grain-fed horses, mixed with one-third bedding straw—this lengthens the heating period—should first be piled in the protected spot chosen for the bed's location—a place where the north winds cannot reach. If the manure is dry sprinkle it with tepid water to start decomposition.

Steam will begin to rise from the pile in from three to five days. As soon as it appears have it well worked over, turning the outside inside and bringing the inside to the surface—then let it alone to warm up again. This will take two or three days more—the steam will indicate when it is ready—and then the work may proceed.

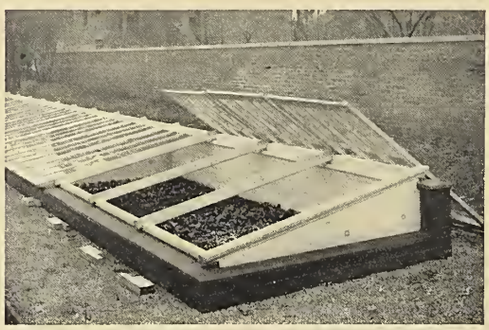
Spread the manure evenly over an area large enough to give a full two-foot margin all around outside the sash or sashes. Make it 18 inches deep—this for the latitude of New York city; have it proportionately deeper and broader in colder localities—and pack it firmly. On this flat pile set the frame to carry the sash.

This frame is a bottomless and topless box made of two-inch planks; it should slope on top from a height of about 12 inches at the front to 18 or 24 inches at the back, with the sides slanted to conform to the slope. Its ground dimensions are regulated by the size of the sash it is to have as its top or covering—so, as a matter of fact, the first thing to do in making a hotbed is to get the sash.

Any old sash will do, whatever its shape or size. Glazed for a window, it will doubtless leak when put to this more trying use, but if it is reasonably tight the plants under it will not suffer. Lacking a discarded sash, regulation hotbed sash will of course be necessary, but they are not expensive. They are glazed differently however from window sash—and the way of it ought to be among the gardener's accomplishments, for breakage is sure to occur.

Their bars run lengthwise only as you will see from the illustration, and are "rabbeted" to receive the glass. Spread soft putty along this rabbet, then, starting at the bottom of the sash, press the first pane down and into the putty; fasten it with brads—the glazing points are not strong enough. Let it lap onto the wood of the bottom rail half an inch, forming a watershed, and lap each succeeding pane onto the preceding one half an inch in the same way, as shingles are overlapped upon a roof. A brad under each lower corner will keep the panes from slipping down.

With the hotbed frame placed upon the packed manure, *the back or high end to the north always*, proceed to bank up on the outside of it with more manure—quite up to the level of the lower or front edge. Then spread the soil, which is the actual seed bed, inside, making it from four to eight inches deep according to what you purpose growing. The shallower depth is quite sufficient for salads or for flower seeds—only radishes and deeper growing root crops require the deeper bed. The soil should be rich and soft and friable—good garden soil with a mixture of sand is best.



Make a hotbed now and gain two months on the season

Put the sash on the bed and let it heat up. It will be hot for three or four days—much too hot for any planting. Keep a thermometer in it and do not plant until it registers 90° F. or less.

As the plants must remain in the bed for two months it is necessary to thin out the seedlings to make room, instead of transplanting to more commodious quarters. This should be done as soon as they appear in order to give the ones spared plenty of room to develop, right from the start.

Water with a sprinkler, keeping the soil in that condition described in the November *Beginner's Garden*—that is, just moist enough to crumble apart slowly after being squeezed in the hand. Be sure that the sash is always in place after you have tended the bed—forgetting to replace it will result in plant tragedy—and ventilate on warm days by raising it ever so little or slipping it down if there is no wind; do this only in the middle of the day, between 11.30 and 1.30 however, when the sun is shining directly on the glass.

Till the soil and do exactly as you would with plants growing anywhere in the garden—only do not keep the sash off for any length of time, Reach under to do the work. Nasty little green things that look like lice will probably appear—beastly, soft, smushy aphids they are. They revel in hotbeds, but a solution made of ¼ pound of white soap dissolved in a little boiling water and then reduced in strength by adding 5 gallons of water, used tepid in a sprayer, will make short work of them. They will come again, no doubt—but vigilance and more soap spray, and then vigilance, will save the crop from their devastating armies. Fortunately they die easily—almost as easily as they come. They are often on the under side of leaves and unsuspected until the leaf curls—and then unseen because of their color. Keep a sharp watch for them.

A mat of straw or several thicknesses of burlap should be provided to cover the sash on cold nights—and it is seldom wise to build the bed before the last week of February or the early part of March. If ready by March 10th you will find it early enough for all practical purposes—and the plants in it will be big fellows by the time the ground is warm enough outside to receive them.

Unless the space it occupies is needed during the summer the bed may be left and used for a coldframe in the fall, for lettuce or other salad plants.

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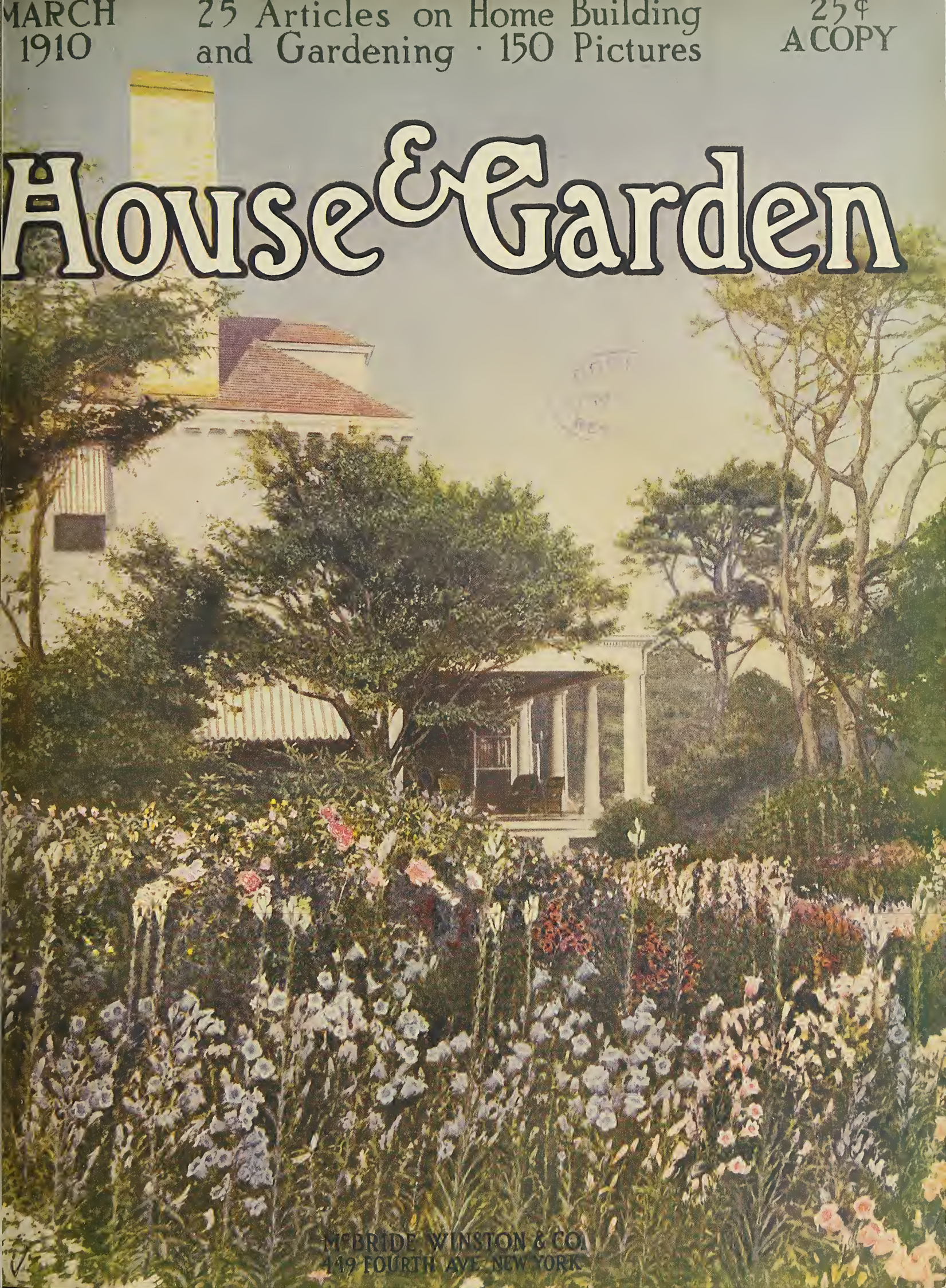

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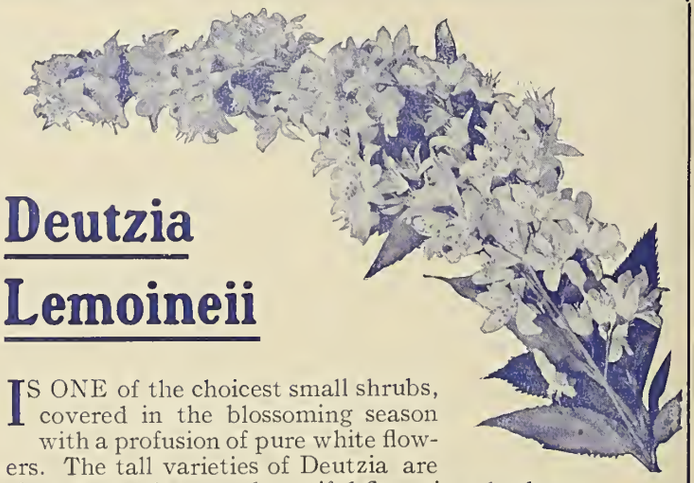

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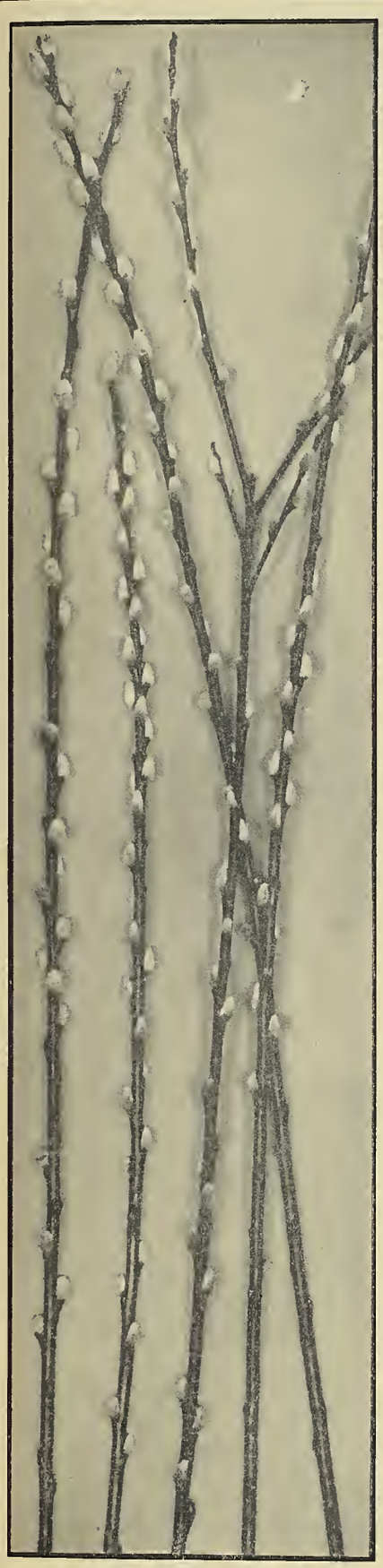

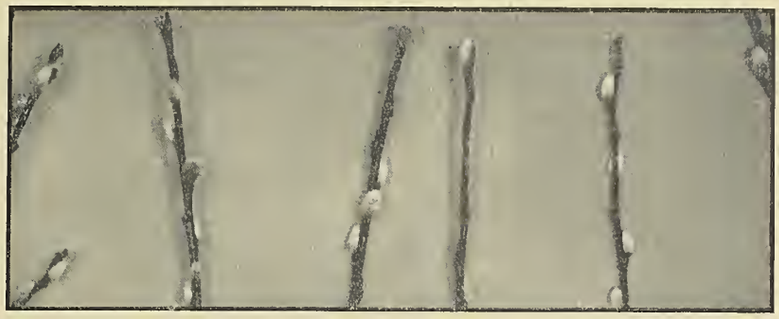

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HENRY H. SAYLOR, EDITOR

VOL. XVII, No. 3

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The National Society of Craftsmen has furnished this exhibition dining-room at its quarters in the National Arts Club, New York
Everything in it represents the work of a craft-worker member

House & Garden

VOLUME XVII March, 1910 NUMBER 3

Nothing will give such an air of stability to a country home as a proper setting of trees, but successful planting is a difficult art

Planting Trees for Air, Light and Shade

TREES AROUND MANY HOMES ARE EITHER CLOSE ENOUGH TO MAKE THE HOUSE DAMP OR TOO FAR AWAY TO MAKE THE SHADE OF ANY VALUE

BY GRACE TABOR

Photographs by Thomas W. Sears, Nathan R. Graves and others

[*The sixth of a series of articles by Miss Tabor on the subject of landscape gardening as applied to the American home of moderate size, preceding titles being "Utilizing Natural Features," "Getting Into a Place," "Formal or Informal Gardens," "Screening, Revealing and Emphasizing Objects or Views," and "Boundary Lines and Boundary Plantings." Any questions relating to further details and planting information will be gladly answered.*]

THERE are two distinct aspects under which the question of tree planting and the shade and shadow resulting from tree planting must be considered. One is shade in its relation to buildings, the other is shade and shadow in their relation to landscape composition—in other words one is a purely practical, the other an esthetic, aspect. The small place is limited usually to the former; the practical aspect being therefore of more general application, we will give it first attention.

It is very difficult not to go to extremes in the use of trees. The tendency is invariably to plant either too many or not enough, according as the planter loves "cool shade" or abominates "sombre shadow"; and in this connection, as in many others, personal prejudice is very strong and does not take kindly to being reasoned with. There is a standard, however, set by hygienic demands as well as by those of beauty—the two are in absolute harmony, by the way—which will regulate this unruly tendency to extremes, if it is permitted to do so.

In the triangle of air, light and shade that this subject of tree planting resolves itself into there is one member which we *cannot* live without. We need all three of course, to live happily and comfortably—and healthily—yet light and shade are not vital. Life does not depart if these are withdrawn from us; but it does if air is. We can live longer deprived of anything than we can deprived of air—indeed we cannot live at all if it is taken away from us.

This little abstract analysis may seem to have nothing to do with tree planting, but it has. Anything that emphasizes the importance of an element which can be excluded from our houses

so easily by wrong placing of trees has an important lesson for prospective planters of trees.

Of course foliage will never be dense enough anywhere to smother anybody, but it can very easily be dense enough to seriously interfere with that free circulation of air which is so essential to comfort in hot weather and to health at all times. That is the point.

On the other hand, a dwelling situated in the open, with no trees near it, is subjected to such a glare of sun and heat during the summer as to seriously affect those living in it; for even with awnings or shutters it is impossible to secure that depth of shade needful to repose in scorching weather. Nor is a breeze sufficient compensation—man needs rest from heat and glare as much as he needs cooling, something to soothe disquieted nerves as well as something to lower his temperature. A certain measure of darkness is comforting as nothing else can be—thus it is evident that air is not enough without shade. We must have both.

In these days of big tree moving there is no excuse for a sun-blistered, treeless home

But ventilation cannot be perfect where the sun's rays do not reach—heat is necessary, in other words, to help us keep cool; so, though air is the prime essential and shade next, the ideal conditions provide all three and all three are what we must aim to secure, the first in fullest abundance, the second and third in needful proportions.

I doubt if the real secret of the relation between shade and a building, the thing which makes the planting around it a success or otherwise, presents itself very often to the gardener. Certainly I have never found any mention of it in any work on planting, though hints leading in its direction are given in one or two very ancient treatises on the subject—and some gardens, especially those of India and other tropical countries where the art has been greatly perfected, seem to show a development of the idea that may or may not be conscious. Yet this one thing is to my mind the most important in the whole matter of shade tree planting.

Planting should shade the *ground around* a building rather than the building itself. No structure is ever one whit cooler for having the sun kept away from it on one side or another if it shines directly and hot upon the earth immediately about it. It may look cooler from without, but that is all. Even a lawn reflects the light and heat up and back into windows and doors and porches; and awnings afford no relief from this reflection, for it rises under them.

A house is itself a shelter from the sun; the sun should shine upon it—into its windows indeed. Every room needs light and unobstructed outlook—which means of course that trees cannot stand very near. But this unobstructed outlook from windows and doors and verandas should be cool and inviting, should rest upon shade instead of a dazzling expanse that glimmers with heat.

Shade around a house means cooler air around it, therefore cooler air coming in at its open windows, whereas shade that is only upon it cannot affect the surrounding atmosphere in the least; and shade at a considerable distance from it is offset by the intervening sunny area whence come blistering little puffs of heat that are the very last straw to one's endurance on a genuinely hot summer day.

It is better to plant two trees of one kind rather than one each of two kinds

The little diagram of tree arrangement around a dwelling is given as a study in shade only and illustrates the manner of finding out what results any given arrangement of trees will give. At noon, with the sun approximately a little south of overhead, the trees will cast their shortest and least shadow, and this will of course fall on their north side. The object is to place them where this shadow as it swings on towards the east and lengthens in the hottest part of the day, is seen at its maximum from the house. This has been effected with every tree as here shown save the two small ones in the upper left hand corner and the single one opposite on the right. The latter is placed to cut off the hot sun of early morning, while the two former, which may very well be some tall, spire-like tree such as the Lombardy poplar, will stretch their lengthening shadows around as the day wanes until they reach along the grass to the house at sunset. The tree nearest the house is fifteen feet from it and though the shade of several will fall on the building's foundations and part of the lower story at some hour of the day, the building itself is actually in the open and the sun has free access to every side.

In passing it is worth while to remark that a house placed thus at an angle to the points of the compass enjoys the greatest number of those advantages which arise from sun and weather. Every room has sunlight for a little while daily, winter and summer, and the prevailing south and west breezes will, either of them, strike two sides of the building.

It is always very easy and very wise to work out shade out-of-doors on the ground, using rather long stakes. Where there is not much space this is particularly advantageous; the direction of the stake's shadow will of course be the direction of the tree's—and very exact locating of a tree is sometimes necessary to get shade just where it is wanted.

Always bear in mind that the promotion of individual growth is not the most desirable thing to foster in tree planting. Symmetrical specimen trees are interesting, impressive and sometimes very beautiful as specimens, but the effect of many solitary, evenly branched individuals,

Plant trees where their shade will be all around a house rather than upon it

even though irregularly placed, is never equal to masses planted so closely that their branches intermingle and crowd; and though it may make no great difference when viewed from a distance, it always assures more charm in a plantation to set two trees of the same variety from six to eight feet apart than to use a single tree anywhere. Once in a great while circumstances may warrant the planting of just one, but very, very rarely.

Plan your tree planting carefully on paper beforehand with the varying shadows in mind

The species to be used is always a matter for the exercise of very great restraint and caution, and one ought really to know something about trees before venturing to select. It is better to have many of one or two kinds than one of many kinds, and although there must be a certain amount of diversity to prevent monotony, we should ever be mindful of the fact that Nature continually presents thickets and groups and patches dominated by one variety. Sometimes there are a few of one or two others and sometimes not; if it is a beech wood there may be a few chestnuts, a sweet gum here and there and now and then a tall, straight maple or an oak, but these are scattered. The ranks of sleek, gray, satin-coated beeches rising on every side are in an overwhelming majority over all the others combined, a majority of from 75 to 90 per cent.

This proportion is not possible always of course, nor necessary; but if three trees are to be planted, have two of one kind and one of another; if ten, have five or six of one kind, three of another and one or two of still another, rather than three of one kind, two of three others and a "singleton."

There is a system of selection which has been used in some of the best and greatest landscape parks in the world, that is worth considering by the owner of even a half acre, though he may not be able to apply it fully. This is the formation of groups composed entirely of different varieties of one family or species. Take for example the maples; there are in all between sixty and seventy species, out of which a dozen are found in North America—enough to make up a very respectable group from just native species, even though some must be omitted as not hardy north.

The red maple is a beautiful tree in winter and summer, whether young or old, and grows from 80 to 120 feet high; the silver maple attains the same height but is distinctly different in habit, being more spreading. It is swifter growing too, but its wood is soft and easily broken, therefore it has not the permanent value of the other varieties. The sugar maple, 75 to 120 feet high, is probably the finest of the genus when all its good points are considered. Beauty, permanence, shade and utility are some of these.

The black maple is very like it, but differs in its habit and the shade of its green; the large-toothed maple is smaller and different from all the rest in many ways; the ash-leaved maple or box elder, quick growing and from fifty to seventy feet high—which doesn't look like a maple at all, by the way, to untrained eyes—is still different; and then there are three small species which are scarcely more than shrubs—the mountain maple, growing to thirty feet, the striped maple which ranges from a shrub to forty feet and the dwarf maple of the west which stops at twenty-five feet—all sufficiently dissimilar in size, shape and color to furnish variety in abundance when added to the group.

The form of a tree is important architecturally when it is to be placed in intimate relation with a building which belongs to a distinct style or period. With the Gothic, for instance, trees of the Gothic type should be used—poplars and any of the spire-shaped evergreens are examples—for harmonious lines are more effective than those which oppose. This is of course a fine point and need not ordinarily be raised, for ordinarily our dwellings are not designed with such strict adherence to the purity of a style as to demand such care in their surroundings. It sometimes presents itself, however, usually after a wrong selection has been made. I mention it for the benefit of those to whose case it may apply.

The Esthetic Aspect

Shade and shadow in their relation to the living picture which all planting aims to create, are subject to the same laws of composition that govern the painter's use of them on his canvas. A landscape is cheerful or gloomy, happy or sad, according as light or shade predominate in it.

It is a difficult matter to say just what the proportion shall be and even more difficult for an untrained eye to determine just what it is in any given landscape; but approximately light and

(*Continued on page* xix)

A massing of trees at the north of a house gives an effective setting without shading the house

A glimpse of the wild garden, looking from the flower garden along the side of the house

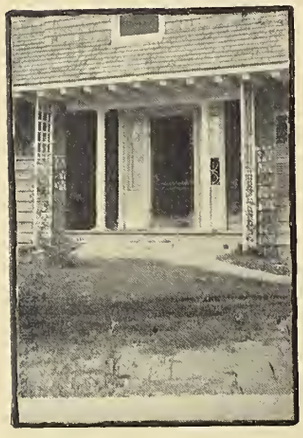
The house is placed near a front corner of the 54 x 160 ft. lot, but with its entrance at one side and its living-rooms at the rear or garden front

The $5,500 Home of an Architect

A HOUSE ON A FAIRLY SMALL SUBURBAN LOT NEAR SYRACUSE, N. Y., THAT SHOWS INDIVIDUALITY, GOOD TASTE, AND AN ATTRACTIVE GARDEN SETTING

BY LOUISE SHRIMPTON

Photographs by T. B. Boothroyd



A wide overhang of the roof shelters the main entrance

AN interesting combination of house and garden, planned with regard to the advantages of the site, is shown in the home of Alfred T. Taylor, architect. Built nearly five years ago, the house is in a suburb of Syracuse, N. Y., on a corner lot 54 x 160 feet. While the street in front is uninteresting, behind the lot are rolling hills, beautiful in summer and winter. Neighboring houses face the street, with front porches that catch the dust of passing traffic. The Taylor house, though the main entrance is at the side of the lot, really faces the hills, as the porch, large living-room and principal sleeping-rooms are all at the back, as far from the street as possible. The house is placed well to the front of the lot, leaving space at the rear for a good-sized garden, entered directly from porch and living-room.

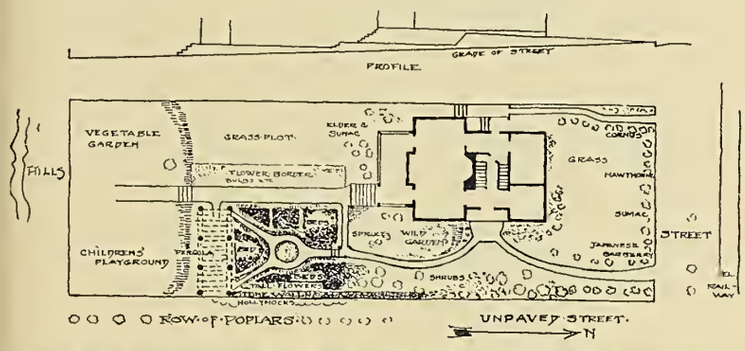
The shingles of the exterior are of California redwood, left unstained and weathered to a soft gray tone. The walls are covered with wide clapboards having the same weathered gray finish. The window and door trim, of cypress, is painted cream white, and the blinds are painted a soft green. Foundations are of red brick and the chimney is of the same material.

The quaint roof lines and architectural detail of the exterior suggest an early Colonial cottage or farmhouse type, modified to suit modern needs. A noteworthy feature is the main entrance, with recessed doorway, leaded glass side-lights and white pillars. The tradesmen's entrance, at the opposite side of the house, has a small porch with built-in seat, approached by a separate path and a small courtyard. A large porch faces the garden and hills. In warm weather it is used as an extension of the living-room, and is screened with Japanese awnings and furnished with old Colonial chairs and a breakfast table. The trellises placed at intervals against the walls form an effective though minor detail of the exterior. They are made of strips of ordinary lath, nailed together at right angles and covered with vines.

The flower garden has cost its owners practically nothing, since it was started with slips obtained from a deserted farmhouse garden discovered on a country road not many miles from the Taylor home. Exchanges of slips and seeds with friends have supplemented the old-fashioned flowers. The garden plan was worked out in connection with the house plan, and has been adhered to in general outlines, but in details is changed every spring. A wide gravel path leads from the porch steps to the foot of the flower garden, where a pergola of rough tree trunks and white-painted beams stands, covered with woodbine, wild clematis and mountain fringe. Beyond the pergola are brick steps leading down to the vegetable garden and children's playground. At the junction of two other garden paths is an arch made of three rough tree trunks topped by curved wires and covered with a moon-flower vine. On one side of the main garden path are flower beds and narrow paths, on the other a wide flower border and grass plot. A low stone wall partly encloses the street side of the garden. Beyond the sidewalk is a row of shimmering poplar trees. Chosen because of their capacity for rapid growth, they will gradually be replaced by elms and maples, since they are of the American variety which often proves unsatisfactory. In the

meantime they make a beautiful and effectual screen for the garden against the houses opposite. Near the stone wall are grouped the tallest flowers, forming a background for the rest of the garden. Hollyhocks grow outside the wall and Canterbury bells, larkspur, foxglove and cockscomb are just inside. In the beds annuals are planted every summer to fill in between the perennials and keep a succession of bloom. Armfuls of flowers are picked in the garden every day until frost comes and even then hardy chrysanthemums continue to blossom. Columbine, hardy phlox, blue and white heliotrope, blue flax, nicotiana, salpiglossis, poppies, marigolds, platycodon and pompon sun-flowers are among the plants that fill the beds. Grass borders are used next the paths, and white flowers mingle with the varying colors in beds and borders in order to harmonize them. The bulbs, first comers in the main garden, grow in the flower border beside the main path, and include red tulips, narcissus and iris. Later, the border, like the beds, is filled in with

The living-room, which measures 14 ft. 8 in. by 28 ft. 3 in., gives up a part of its floor space for dining use. A light brown stain finishes the wood trim



The plan and profile of the lot shows an extraordinarily successful utilization of the comparatively small space

annuals. Two borders are planned for the coming season, one on either side of the path.

On the slope extending from the front entrance to the large porch is the wild garden. Many wild growing things of the region have been dug up and brought to this tiny plot. Maidenhair and other ferns, myrtle, bloodroot, trillium, spring beauty, hepatica, wild columbine, lady's slipper and wild roses grow thickly on the bank. Little blue spruce trees were also brought from the woods, and rocks are planted with the flowers to duplicate wood conditions as far as possible.

Roadside shrubs were transplanted to the garden from country highways and lanes. In front of the lot are cornus, hawthorn, sumac, Japanese barberry (the only hot-house product) and elder. Near the large porch is a big bush of thimbleberry, extremely decorative with its glossy fruit and leaves, and elderberry and sumac grow nearby.

The first floor, as will be seen by the plan, has a central hall of small dimensions, with a winding stairway. On one side is a small reception room, on the other a flight of three steps leads down to the large living-room, made higher than the smaller rooms by a greater excavation under the floor level. One end of this room is used as a dining-room. A recess holds the sideboard. Two other recesses, opposite each other, contain, one a large brick fireplace, the other, built-in bookshelves and desk. Two French windows with divided half doors open upon the porch.

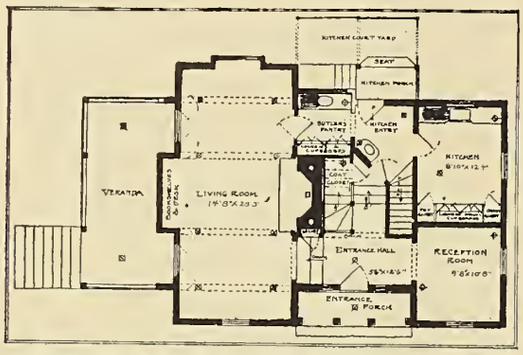
On the second floor are four large bedrooms, one of them provided with a fireplace. Built-in window seats are in nearly all the rooms. The space behind the winding stairway has the effect of a gallery, and with its bay-window, seat and cupboards, makes a pleasant reading nook.

On the basement floor are a laundry and workroom, as yet unfinished, and the usual cool-room, coal-bins and furnace room. On the third floor is the maid's room and an unfinished attic.

The plan is unusually well adapted to the needs of an average family, and although the house would be classed as small, the rooms are large.

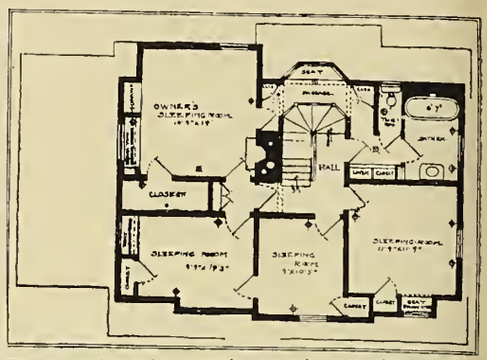
The interior wood trim throughout is whitewood. In the living-room this is stained a light brown, except for the doors, which are painted a creamy white. In the kitchen the woodwork is painted a dull green. Throughout the rest of the house the

From the living-room and the adjacent main porch the view is over the garden towards the hills, rather than out upon a dusty street



On account of its size it was thought best to make the living-room higher by lowering its floor

An unusual and ingenious arrangement of lighting fixtures, where the bulbs and cords are suspended from wooden arms on the side wall woodwork



The location of the stairway gives an interesting balcony effect with a seat in the bay at the rear

finish is ivory white enamel. The stairway rail, treads and newel post are, however, of birch, stained mahogany color. The floors throughout are beech finished in light brown.

A hot-water system heats the house. The radiators, usually an inharmonious feature, were treated to a coat of green paint, which was nearly all rubbed off before it became dry, giving a bronzed effect that is pleasing in tone and color.

The electric fixtures in hall and reception room are in dull brass, of a formal type that harmonizes with the Sheraton chairs and Colonial tables. In the living-room the fixtures are simple in style, in accord with the informal character of the room and its furniture; wooden arms or brackets, finished to match the other woodwork, project from the side walls; the electric bulbs hang from the brackets, shaded by glass globes of bell shape.

The window curtains throughout the house are of plain madras, of a light tan color. They are made with a scant valance and hang in straight folds.

Wall coverings are dispensed with in nearly all the rooms. In the reception room and hall the plastered walls are tinted a pale yellow, while in the living-room they are covered with golden brown burlap. The kitchen walls are painted green like the woodwork. In the sleeping-rooms the natural color of the plaster is as yet left untouched.

The interior of the Taylor house is an example of the unspoiled work of an architect. The furnishings have not been allowed to interfere with the architectural detail, but harmonize with it. While the owners plan the completion of two or three unfinished rooms in basement and attic, and the painting or papering of some of the bedroom walls, these additional features will cost no more than three hundred dollars.

The Garage for the Country or Suburban Home

ITS PRACTICAL REQUIREMENTS IN THE WAY OF FIRE PROTECTION, ACCOMMODATION AND EQUIPMENT, AND A WORD AS TO ITS ARCHITECTURAL DESIGN

BY CARLETON MONROE WINSLOW

Photographs by Waldon Fawcett and others

THERE was a time when the city man, if inveigled from his customary habitat into visiting his suburban or country friend, was invited sooner or later to inspect the stables, see the horses, and look over the vehicles and other paraphernalia of comfortable or uncomfortable country road travel. From this era we are passing to the newer one, that of garage, motoring and automobile, which supplants in the conversation between host and guest, talk of carriage, horse and stable. In many country places the stable is still kept and the private garage is erected as an addition or extension to it, the new garage being built frequently as an entirely separate building, and again in new places, particularly when the area of the lot is limited, the garage is planned as a part of the dwelling. The garage lends itself delightfully as an architectural element in planning the group of buildings of a country place or town house. The plan of having it but one story high subordinates it to the house. The garage should always be in keeping with the architectural style of the house, and its position on the lot carefully thought out as well as the problem of its relation to the landscape.

Provide in your garage for either a repair pit or a hoisting tackle

The plan for the contemplated garage is the first matter to think about, unless it is the site. It should not be too large to accommodate the number of cars that will occupy it, and the ease with which they are enabled to enter or leave it, as well as planning for easily accessible work-shop and bench, washing

Rough field-stone walls are backed up with reinforced concrete, and the roof is of the latter material

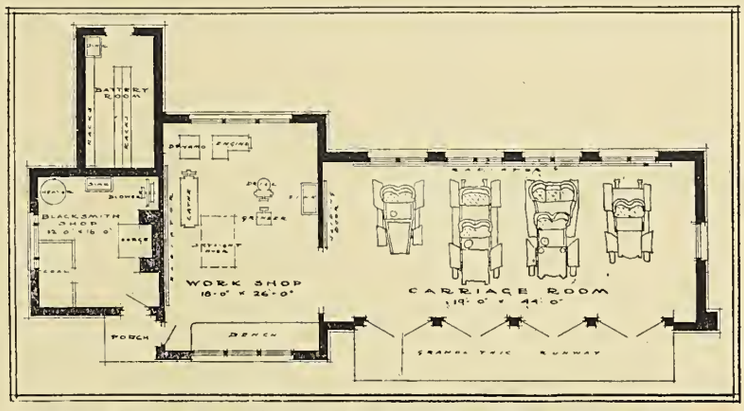
Cement walls and red tile roof make an attractive combination for the private garage

place, store closets and other accessories, must be taken into serious account in the initial stages of planning.

It is seldom wise to plan only a one-car garage, unless there is a definite reason for so doing. There are occasions when one will wish to put up a visitor's car, or otherwise house a second motor. However, the garage is sometimes a mere shed or enclosure, and as such can be reduced to 9 ft. by 15 ft. inside measurement for an ordinary roadster, with a height of 9 ft. 4 in. to the top of the plate for the roof rafters. Such a one was built for a physician in Asbury Park, New Jersey, and with its outside covering of cream colored siding and red shingles, glass lights with heavy panels in the doors, it is by no means unattractive and was built at a complete cost of $250.

Generally, the garage should be planned so that the cars can stand against the back wall with the door or doors directly opposite; one door 9 ft. 6 in. wide, and of about the same height, is generally sufficient, providing the room is about 20 ft. deep, to allow for making the necessary curve for rolling the car into place. These dimensions apply to a garage to hold two cars. For a still larger garage two doors are better, or one sliding-door of three sections making an opening of 9 ft. on one side or the other of the door as desired. A small door, either separate from the large doors or built into them, will be found convenient in the winter time for accessibility and keeping in the warmth.

Unless there is a separate work-room a work-bench about 4 feet wide at one side of the room is a necessity. A window should be over it with an electric light conveniently arranged for night repairs, and a sink with hot and cold water connections built in at one end. This will be found a great convenience while repairing tires. A shelf below makes a suitable place to store tires, and a closet for storing gears, springs and other duplicate and sundry parts should be near at hand. The location of the washing stand follows generally the arrangement of a carriage wash in a stable. It is advisable, however, to have the whole floor of the garage slope to the one or more floor-drains. A revolving overhead wash, fitted with an electric light, will be found most useful. Closets with poles, hooks and drawers for the storage of rugs, coats and other accessories should be at hand. The attic can be arranged for the storage of tops, usually, and other large parts not in use. A hand elevator will be found a great convenience for lifting these heavy articles and can be put in at a small cost.



The plan of the garage pictured below, showing the desirable equipment of a four- or five-car house

There seems to be a difference of opinion as to the usefulness of the repair pit. The alternative is a chain tackle arranged to lift one end of the motors to get at the under side, and geared to work easily by hand power. But the pit has a number of advantages in spite of its extra expense. If the garage is built upon sloping ground there should be an outside escape from the pit with glass in the door. Suitable dimensions will be found to be 10 ft. by 3 ft. 6 in., with a depth of 4 ft. 6 in. Seats 12 in. wide and 18 in. high, arranged on both sides of the pit, will be found a great comfort to the mechanician. A drain in the floor and an electric light upon a cord are practically necessities.

Other questions of planning are involved with the very important one of making the building as fireproof as possible.

Mr. W. D. Denegre's garage at Manchester, Mass., designed by Andrews, Jacques & Rantoul and built for approximately $5,000

A garage at Chestnut Hill, Mass., with wash-room and repair room back of the car room on the central axis, permitting easy handling of the cars entirely under shelter

Regulations as to construction materials and arrangement of the garage vary considerably in various localities. Outside of the city limits of the more important centers, there are few restrictions, except those imposed by the Board of Fire Underwriters and the owner's own desire for security. It naturally follows, however, that the building should be constructed in the safest manner, both to secure the best insurance rates and to anticipate more strict regulations for house and machine which will undoubtedly come in the future. The floor should be of concrete, the walls of brick, concrete or porous tile plastered upon the outside. If the walls are of wood the studs should be dressed and exposed on the inside. If the floor alone is of wood the ceiling should be constructed of sheet metal of the simplest design. A better floor than this, particularly if there are living apartments above, is of reinforced concrete of one of the approved systems. The regulations for the garage built within the city limits of New York are strict and somewhat complicated. Some slight modification is allowed for the private garage where no gasoline is kept in storage and where the fuel tanks of motors are neither filled nor emptied, but this is only allowed on special permit from the Fire Commissioner. The architect planning a garage within the city limits should have these garage regulations at hand. They are easily procurable at the Fire Department headquarters and the writer is of the opinion that they should serve as a guide in planning a garage to be built at more remote points.

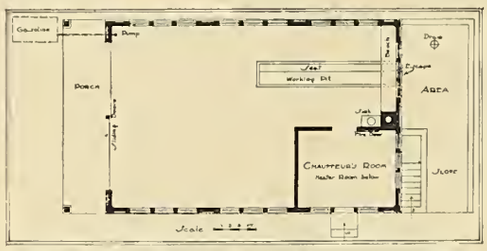
The heating of the garage should be of steam or hot water preferably, brought from the dwelling in pipes laid in a trench. When this is not possible the heating room should be kept entirely separate from the rest of the building. A small coil can be put in to supply the hot water to the wash stand and sink and to the living apartment if there be one.

Only incandescent electric lighting should be installed.

Gasoline should always be stored in a tank underground and at least 10 ft. away from the walls of the garage. The New York City regulations require the tanks to be embedded in 12 in. of concrete. A suction pump fitted with hose connection and gauge are inside the building; vent, convenient syphon filler and a device for keeping the tank filled by water flowing in automatically as fast as the gasoline is pumped out are other practical accessories of a good storage tank. This latter device is particularly advantageous; it leaves no unfilled space at the top of the tank just above the liquid to become filled with inflammable and explosive gas. The arrangement of having two tanks of equal capacity is also good. The owner is then automatically notified to replenish his supply of gasoline long before it has run short.

As to the cost: it is difficult to advise or suggest in an article of this sort. The prices of labor and building material vary so in different localities and at different times that estimates here would not be of particular value and might even be misleading. And then again the cost increases as the fireproof qualities of the structure improve. The simplest form of a shelter for the motor, just large enough to house one machine, built upon brick piers with frame walls, shingle roof, wood floor, glass in the doors, no heating nor plumbing, costs about $250 in the vicinity of New York, and less in most more distant points. From this the price runs up. The so-called portable garages are not bad looking, but they seldom harmonize with the style of the house, are not inexpensive and their very name tells of their appearance of instability and their temporality.

In conclusion the writer would suggest to the man who is building a new place, that he build a garage with a capacity of at least two cars. You may not own a motor, you may even dislike automobiles, but the time may come when you will acquire one, or if you sell the place its value is greatly increased over the additional first cost. In the meantime use the garage for something else. The vines and planting would have a fine chance to grow and mature around it. And you can secure a better contract price if the builder of your house puts up the garage at the same time.



The plan of the garage below and to the right. Where a repair pit is planned it should have an outside escape

The folding door is an ingenious feature of this Western garage, designed by Tallmadge & Watson, architects

An abundance of windows make the interior of this Syracuse garage a convenient repair room. Alfred T. Taylor, architect

"Ragdale," the home of Mr. Howard Shaw, architect, Lake Forest, Ill., shows an unusual combination of cream plaster, dark brown woodwork and bronze-blue blinds

Modern English Plaster Houses for America

WHY THE TYPE OF PLASTER HOUSE THAT IS BEING BUILT IN ENGLAND TO-DAY COMES NEAREST TO FULFILLING THE AMERICAN REQUIREMENTS FOR A HOME

BY J. LOVELL LITTLE, JR.

Photographs by T. E. Ellison and others

[*The problem of choosing an architectural style for the American country or suburban home is one of the most puzzling that confronts the home-builder. In order to bring about a better understanding of the more common types and with the idea of clarifying, as far as possible, this whole matter, we have asked a number of prominent architects to present each the case for one particular style. In the December issue Mr. Frank E. Wallis, the well known authority on Colonial architecture, told why a house of that type is the only one to build. Mr. Allen W. Jackson presented in the January issue the case for the Half-timber house. In February Mr. Aymar Embury, II., added his convincing argument for the picturesque Dutch Colonial. A number of other styles will be explained and illustrated in future issues—Italian adaptations, the Patio type and probably one or two others. The Editors will gladly do all in their power to answer any questions regarding style, details or construction.*]

WHEN I was asked to write one of a series of articles, each advocating a particular style of architecture for the country or suburban home, I protested. I said it was foolish to try to prove that one style or another is the only one in which to build a house. The word style loomed large in the foreground; horrid, with all its arbitrary importance, and exceedingly independent and pompous on account of the adulation and attention which it is always receiving from the public. I started to explain to the editor that style is a growth, a long painful process of evolution; brought about by the life of the people that has developed and perfected it, and not an arbitrary attribute to be bought and sold. You know the argument; for no doubt you have cornered an architect and asked him some poser about style, and he has retired behind this well worn armor; but I gave it up and said—well never mind what I said, but I accepted the invitation to argue for a style.

I was not only to argue for a style but I was to present an enthusiastic argument. So at this stage in the game I was committed to do something that I didn't believe in doing, and do it enthusiastically at that. I was to stand up and say, "You must build your house in this style or not at all." I was to be uncompromising in favor of a certain fashion. I had begged the editor to let me "hedge" a little, and I wrote him some very sound truths on tolerance, but he scorned them.

Then he told me that I should present the case for the Modern English Plaster House. He knew I liked the modern English house and he played to my weakness. I still pretended to be disgusted, but I no longer worried, for I saw a great light, and I hope now to show why I felt that my troubles were over.

In "A Dictionary of Architecture and Building" by Russell Sturgis, there are two definitions of "Style" in the following order of importance.

"1. Character; the sum of many peculiarities, as when it is said that a building is in a spirited style. By extension, significance, individuality; especially in a good sense and imputed as a merit, as in the expression 'Such a building has style.'

"II. A peculiar type of building, or ornament, or the like, and constituting a strongly marked and easily distinguished group or epoch in the history of art; . . . . . ."

There is more of this second definition, but this is enough to show its meaning; it is a type, a fashion. I might have added to the sentence quoted, "such as the American Colonial Architecture," by way of further explanation.

But turn to the first definition and read it again, carefully.

The use of shingles as a base, with plaster above, marks this informal country house at Hamilton, Mass., for Messrs. A. L. and F. D. Cochrane. Parker & Thomas, architects

The Henry Howard residence in Brookline, Mass., combining a Colonial fence and classic doorway with the general mass of an English house. Charles A. Platt, architect

It is a big, broad definition. You will find three words worthy of note: "Character," "Significance," "Individuality"—qualities well worth finding in a house.

I am going to try to point out the value of these qualities, and to show you that the modern English house, with all its faults (and to an American these are not a few), combines these three qualities to a greater extent than do the average houses of our own and other countries. Finally, I should like you to consider how similar are our own needs and tastes when we want a home.

Character in house architecture means that the building inside and out shall have domestic qualities and suggest, more than all, a home.

Significance I understand to be the successful harmonizing of the needs of the client with the natural setting of the house; in other words, it is the logical solution of the problem, that brings peace and comfort to the occupants of the house, and gives an outsider the pleasure that one has in any well balanced view or picture.

Individuality is more or less the result of character and significance, and is greatly influenced by the relation of the owner and the architect.

Now Colonial houses have character; no one will deny that; and very charming it is, but it is the character of the past. In his definition of the Colonial, Russell Sturgis says in part that it is the architecture of the Colonies, "especially in American use, that which prevailed in the British settlements in America previous to 1776, and by extension and because the style cannot be distinctly separated into chronological periods, as late as the beginning of the present century," etc.

There are many times that a client comes to one and asks to have a Colonial house, for it is justly a popular type of American domestic architecture. The architect must set about to adapt the Colonial type to modern and special requirements. The difficulty is perhaps best illustrated in the article of this series devoted to the Colonial style, where the author pictures the house and its rooms. What does he do? He draws a delightful picture of days and customs gone by and places "My Lady" in a lovely frame. But "My Lady" is not a modern American woman. No doubt she still exists, and, when a specimen of her is found, give her the Colonial house by all means without a question. She will want it, she will be fitted to care for it; in short, to give it to her is the solution of the problem in this particular case.

Colonial house architecture to-day lacks significance, except in special cases. That is the truth of the matter. It is the architecture of a more aristocratic time, the architecture of men and women who lived more formally and with less of American independence than we do to-day. It isn't democratic, as we are democratic and as even the average Englishman is democratic.

Take for example the informal out-of-door life, with its varied sports and occupations, shared alike by the whole family. This kind of life is being lived by an ever-increasing number of people in this country, and it is producing a different style of architecture than that which prevailed a century ago.

"Bolnhurst," Llanfairfechan, North Wales, is an excellent example of the possibilities the English plaster house possesses for picturesque mass. H. L. North, architect

Successful grouping of small windows is a feature of Papillon Hall, an English house, by Edwin L. Lutyens, architect

Where can you find any close relationship between this very vital characteristic of our modern life and the life of Colonial days? The whole scheme of life was more formal. The modern problem of domestic service did not present itself. The great families in the south and in the north, had their slaves, their trained servants and even in the average household there remained some traditions of English formality, of aristocratic rather than democratic life. To-day in most households life is entirely different. The younger generations have much more independence and it is the era of individual development. To-day our children conform less to any formal routine of the household than at any other time in our history. They and their friends share with us the informal life of work and play at home. There is a great movement towards the country and, whether large or small, American suburban and country houses reflect the trend of our life.

All this makes for a new type of house; a house with at least one large living-room that typifies the life of the household. There is no other one room in the house that can economically balance this in size, and it is this one fact that is largely responsible for the gradual growth of a type of house that is comparatively new to us.

No, the Colonial style is not significant to-day. The plan with its central hall and four corner rooms is economical, no doubt, but it is the economy of the bargain counter, inasmuch as one is getting more than one's money's worth of something one doesn't want. The type must always be twisted and turned to fit changed conditions or the client must be molded to fit the frame.

I have dwelt somewhat at length on the inadequacy of the Colonial in itself because it is the most serious rival of the style I am championing. It has tradition, dignity and charm; it still has character and individuality to some extent, but only occasionally does it have significance. Perhaps I am too hard on this style, for I find myself trying at times to qualify my statements, but please remember that I am dealing with the subject in a general way and must treat it generally. I must not dwell too long on the many delightful examples of Colonial houses that I know. I must overlook the fact that I was brought up in a Colonial house, and I must stick to the point, which is that the modern English house hits the nail on the head more often than any other style of house.

I have just fallen a victim to the word "style" in its sense of "a peculiar type of building," which leads me to state here that I am not arguing for the Modern English Plaster House, *per se*, but for the house with character, significance and individuality, and I must now justify my statement that the Modern English Plaster House has these qualities highly developed.

First to get the plaster part of my title settled. No doubt the insertion of this word was a pit-fall designed to limit my field of examples, but I hope to make it serve a useful turn.

"Plaster" is exterior plaster, stucco; a durable wall covering with a limited range of color possibilities, and a variety of

(*Continued on page* xvi)

Is there another type of house that harmonizes more nearly perfectly with foliage than the English plaster one? Jacques House, Lenox, Mass. G. C. Harding, architect

Whether symmetrical or not the English plaster type of exterior grows naturally from the floor plan. Robinson House, Cambridge, Mass. Charles K. Cummings, architect

The wall texture is secured with white latticework. The Dial House, Farnham, England. Niven, Wigglesworth & Falkner, architects

Does this English dining-room of an American country home lack any quality of home refinement? Does it not show character, individuality and significance? Designed by Charles A. Platt, architect

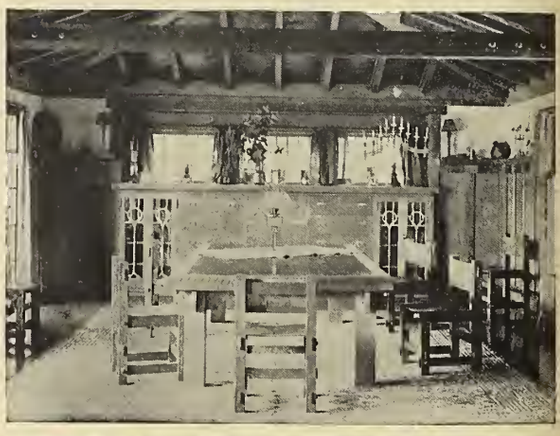
The beautiful shell-top motive of Colonial days can scarcely be improved upon

The simple rectangles of the glazed door flanking the fireplace are too seldom used in china cupboards

This mahogany frame is in striking and effective contrast to its contents and background

At the right the cupboard is built in so as to be flush with the woodwork

Even without doors the built-in cupboard is attractive



Leaded glass doors occupy the ends of this long built-in sideboard and cupboard combined

In this dining-room designed by Lawrence Buck, the china is displayed sparingly over the built-in sideboard

It is curious how the Colonial builders hid delicately carved interiors with solid wood doors

A combined sideboard and china cabinet in white enamel and leaded glass that saves space and makes an effective feature in a bay

NINE TYPES OF BUILT-IN CHINA-CUPBOARDS

Knapsack pump-sprayer holding five gallons

Convenient spraying apparatus for liquid insecticides and fungicides

Barrel pump-sprayer indispensable in large gardens

When, What and How to Spray

INSECTS AND FUNGI THAT HARM PLANT LIFE—WHEN TO LOOK FOR THEM AND HOW TO PUT THEM OUT OF EXISTENCE

BY GARDNER TEALL

Photographs by Dr. C. D. Jarvis and others

ALMOST every plant under cultivation is subject to some blight or pest that it has been free from in its wild state. Fungoid, parasitic growths and insect visitations cause such havoc in our orchards and gardens, from hedgerow to flower-bed, that scientific research into the subject has come just in time to save the plant-grower from many discouragements.

There is now hardly a single plant ailment that we are either unfamiliar with or unable to cope with, wherefore liquid spraying, or the application of liquid fungicides and insecticides to affected trees, shrubs, vines, and plants, has become an expedient of the greatest importance to everyone having a lawn or garden. It is a disheartening thing to see the plants you have worked over and nurtured turn sere-leaved out of season, droop and die, when you have looked forward to their mature beauty and usefulness with all the hope the heart of a garden-maker can hold.

Fungoid plant-diseases are quite as much to be dreaded as attacks from insect foes upon plant life. We can hardly cure their mischief, but, to a great extent we can prevent their occurrence by spraying and, in some measure, check the spread of blight or anthracnose likewise.

As only a microscope will disclose to us just where the minute fungi spores are lodging themselves, it becomes necessary to prevent the possibility of their appearing at all, even if, in seasons past, our trees and shrubs and vines and plants seem to have been free from disease. Not only must they be sprayed once but often, as the effect of liquid spraying (which has great advantage over dust spraying) is cumulative. The first spraying may not reach tiny spores tucked away in budding portions of the plant, which, when these come into branching proportions then present the disease upon a surface that can be reached by subsequent spray applications.

As the writer has often had occasion to remind the garden-maker, all the spraying in the world will be rendered futile if one's neighbor's trees and plants are diseased and do not receive like attention. Therefore one of the first things to do is to prevail on him to have his spraying done coincident with yours, and if he remains indifferent to the matter it is far better for you to bear the expense of doing it for him than to subject your trees to danger from contamination. Indeed, the matter of communal effort in this direction is of such importance that many neighborhood societies of garden owners have been formed, and out of the common treasury the expenses of neighborhood spraying have been borne, thus establishing one of the most helpful co-operative movements known for the maintenance of fair areas.

Insect pests may be divided into two general classes: insects that injure the plants by biting and chewing (these must be got rid of by poisoning their food), and insects that destroy plant life by sucking the juices of the plants (these latter must be met openly and killed by external poisons, fume suffocation, etc., as they pay no attention to surface poisons).

In the first class we have the Flee-beetle, the Potato-bug, the Cabbage-bug, Aphides (Plant-lice), and the Cinch-bug, and among the second class are to be found the moth parents of the Cut-worm, the Tassel-worm, the white Grub-worm's moth, the Onion-maggot, Maple-borer and Rose-bug.

Spraying is easily accomplished even on the smallest premises. Excellent and inexpensive apparatus is offered in the market (your florist or your nurseryman can always supply you with reliable manufacturer's addresses). The pump should be strongly made, and one nozzle will be sufficient. You will probably have to renew the spraying hose every year, if you have much work to be done. If you have a large garden you can rig up a barrel on wheels, for moving the Bordeaux Mixture or other arsenate sprays around, and fit it with pump hose and nozzle at a total cost of ten dollars. For a small garden a hand sprayer costing, say, four dollars, is sufficient. The knapsack style of sprayer, carried by straps on the shoulders, is especially good and will throw a spray fully fifteen feet. This can be used to equal advantage on fruits

and vegetables. With heavier sprays, such as Paris green and Lime-sulphur wash, agitation is necessary to keep the compound properly mixed, and many mixtures should be strained before using; thus for Lime-sulphur a strainer of not more than twenty meshes to the inch is necessary (a smaller mesh would fill up). The nozzles must be kept from clogging.

In spraying, as high a pressure as possible is advisable, as the mist-like spray produced thereby reaches every part of the plant. Indeed thoroughness in spraying is one of the essentials to successfully combatting plant pests, for any hit-or-miss program renders the final result of little lasting value.

Timeliness in spraying is a matter of the utmost importance. The garden-maker should make his preparations early, and from time to time study up the subject so he may be forewarned as well as forehanded. One good way to keep posted on such matters is to study the catalogues of manufacturers and by reading agricultural bulletins, as year by year spraying apparatus is improved and simplified, and many valuable spraying formulæ are produced to combat with success new plant pests. The accompanying table is, for all general purposes, a safe calendar of spraying operations to use as a guide.

The following recipes are some of the more common ones in general use:

INSECTICIDES

1. *Arsenate of Lead.* Use 4 oz. to 5 gals. of water.

2. *Paris Green.* Use ½ oz. Paris green and 1 oz. freshly slaked stone lime to 5 gals. water.

3. *Kerosene Emulsion.* ½ lb. soap dissolved in 1 gal. boiling water. Add 2 gals. kerosene; agitate 5 minutes. Dilute a dozen times before applying with spray.

4. *Lime-sulphur.* Use lime, 1 lb., sulphur 1 lb., salt 1 lb., water 3 gals.

5. *Arsenite of Soda.* Use white arsenic (crystalline) 1 lb. to 2 lbs. Carbonate of soda.

6. *Ammoniacal Copper Carbonate.* Use Copper carbonate 5 oz., Ammonia (26° Beaumé) 3 pints, water 45 gals.

7. *Whale-oil soap.* Dissolve 2 lbs. in 1 gal. hot water. Dilute 4 times before spraying.

8. *Formalin Spray.* Use 1 pint Formalin to 30 gals. water.

9. *Copper Sulphate.* Use 1 lb. Copper sulphate to from 25 to 50 gallons of water.

FUNGICIDES

10. *Bordeaux Mixture.* Use 5 lbs. Copper sulphate, 5 lbs. unslaked quicklime, and 50 gals. water. Slake lime with water to a thin paste and strain this. Place lime paste and Copper sulphate in jug and mix thoroughly by shaking. Then add this to full quantity of water. Any arsenites to be combined with Bordeaux mixture may be added as required.

11. *Sulphide of Potassium.* Use 4 oz. of potassium sulphide to 5 gals. water. Dissolve sulphide in warm water and dilute to spraying strength. Use only when fresh as it soon loses strength.

The following names of insect and fungous pests are followed each by the number of the recipe for the spray to use in coping with it:

INSECT PESTS

Aphids (Plant Lice) 5; Borer 10; Canker Worm 2; Codlin Moth 5, 9; Cottonwood-leaf Beetle 5; Cutworm 5; Elm Beetle 5, 3; Elm Scale 3; Fall Web-worm 5; Four-striped Plant-bug 3; Hollyhock Bug 3; Leaf Cutter 3; Maple Borer 11; Maple Cotton Scale (Wooly Scale) 7; Mealy Bug 7; Mite 3; Oyster shell Scale 3, 4; Red Spider 3; Rose Bug 1; Roseleaf Hopper 7; Rose Scale 3; Rose Slug 6; San José Scale 3, 7, 4 (winter); Scurfy Scale 3, 7, 4 (winter); Tussock Moth 2; Willow Worm 5.

FUNGOUS PESTS

Anthracnose 10; Chrysanthemum Leaf-spot 10; Hollyhock Rust 10; Leaf Blight 10; Leaf-rust 10; Maple Leaf-spot 10; Mildew 10; Pansy Rust 10; Rose Leaf-blight 10; Rust 10; Verbena Rust 11.

For the Borer paint the trunk of trees with lime-wash, containing 5 oz. of Paris Green to each gallon of water. For ants pour a teaspoonful of bisulphate of carbon in each ant-hole and cover up. The chewing insects that injure our ornamental trees may be destroyed by arsenite sprays, but the sucking insects must be smothered by such sprays as the whale-oil soap (7), kerosene emulsion (3), or the lime-sulphur solution (4).

One of the greatest aids to freedom from fungous and insect pests is cleanliness in the garden. See to it that your lawns, yards, orchards, gardens, borders and all are free from rubbish, especially free from vegetable matter, such as old tree-twigs and plant stocks that have died from abnormal causes.

Calendar of Spraying Operations with Key to Insecticides and Fungicides to Use

Plant	Recipe No.	First Spraying	Second Spraying	Third Spraying	Fourth Spraying
Apple	10	Before budding	Just before blossoms open	Just after blossoms fall	Ten days later.
Apricot	9	Before April 1	When fruit has set	Ten days after fruit has set	If rot appears.
Blackberry	2, 9, 10	Before budding	When new canes 1 ft. high	Ten days later	After fruiting and trimming canes.
Cabbage	2	When worms appear	Whenever necessary	After heads form	Whenever necessary.
Cauliflower	2	When worms appear	Whenever necessary	Whenever necessary	Whenever necessary.
Cucumber	10	When young plants come through ground	Whenever necessary	Whenever necessary	Whenever necessary.
Currant	2, 10	When worms first appear	When fruit half grown	After fruit is picked	Fifteen days later.
Cherry	3, 9	Before blossoms open	Just after blossoms fall	Ten days after blossoms fall.	Just after fruit is picked.
Dewberry	2, 7, 10	Before budding	When new canes 1 ft. growth	Ten days later.	After fruiting and trimming canes.
Gooseberry	2, 10	When worms first appear	When fruit half grown	After fruit is picked	Fifteen days later.
Grape	2, 9	Just before growth starts	When leaves one third grown	Just before blossoms open	Just after fruit sets.
Melon	10	One month after planting	Every ten days	Every ten days.	Whenever necessary.
Pear	9	Before budding	Just before blossoms open	Just after blossoms fall	Fifteen days later.
Peach	9	Before April 1st	When fruit has set	Ten days after fruit has set.	If rot appears.
Peas	7	With first appearance of aphides	Whenever necessary	Whenever necessary	Whenever necessary.
Plum	9	Ten days before growth starts	Just before blossoms open	Just after blossoms fall	Fifteen days after blossoms fall.
Potato	2, 10	When plants 6 in high	Every ten days till growth stops	Every ten days till growth stops	Whenever necessary.
Quince	9	Before budding	Just before blossoms open	Just after blossoms fall	Ten days later.
Raspberry	2, 9, 10	Before budding	When new canes 1 ft. high	Ten days later	After fruiting and trimming canes.
Rose	7, 11	April 15	Every ten days	Every ten days	Every ten days.
Strawberry	2, 10	When growth begins	Whenever necessary	After fruit is picked	First appearance of leaf roller.
Squash	10	One month after planting	Every ten days	Every ten days.	Whenever necessary.
Tomato	10	When rot or blight appears	Whenever necessary	Whenever necessary	Whenever necessary.

To have early vegetables start the seeds in a hotbed, coldframe or in the house if the former are not available

Grow Your Own Vegetables

THE WHOLE ART OF STARTING THE PLANTS INDOORS OR IN A HOTBED OR COLDFRAME —JUST HOW TO MAKE FLATS, SOW THE SEEDS AND HARDEN OFF THE SEEDLING PLANTS

BY F. F. ROCKWELL

[This is the second of a series of articles which will cover in a thorough and practical way the subject of amateur vegetable gardening. The aim is to furnish information covering every detail of what to do and in such a form that it will be clear to the very beginner just how to do it. Each article and its tabular data will give the information needed at the time of its publication, so as not to confuse the home-gardener with an overwhelming quantity of detail; that is, the reader will learn what is to be done at the proper time for doing that particular thing. Those who follow the suggestions made, from the selection of seed to the storing of winter vegetables, may confidently expect a successful garden.]

IF you expect to have a vegetable garden this year—and no matter how small your available ground is, you certainly should be planning one—don't miss the fun of starting your own plants. It is not necessary to have a greenhouse to do this. You can make a hotbed or coldframe with little expense, or, if you do not care to go to the trouble of doing this, any warm sunny window in a heated living-room will answer the purpose.

Have you ever put a packet of little dry brown seeds in the ground and watched daily for the earth to crack above them? If not, you have missed one of the most interesting experiences possible! And if part of your seed sowing is done now, while winter reigns without, and the leafless trees,

"Bare ruined choirs, where late the sweet birds sang,"

are bent against a cheerless sky, you will find your little experiment increased tenfold in interest, and you will watch for the first green seed-leaf pushing aside the mold with a keenness of expectation and a satisfaction that will repay your trouble a thousand times.

It is not a difficult art—this matter of starting your own plants. Let me emphasize at the outset that the main factor of success will be *regular attention*. It won't take many minutes a day, but it *will* take a few minutes every day. Don't forget that, and if you are thinking of starting a few plants with the idea that you can spend a few hours to-day sowing the seed, and, in three or four weeks, half a day transplanting them, and later a day setting them out in your garden, you would better give up the plan now, and later on spend at the florist ten times what your seed would have cost for some plants whose pedigree you know nothing about.

All the apparatus necessary for starting seeds indoors are flats, a sieve and a watering-can

It is very much better to start your own plants, and you will find it a good deal of fun, too. Do not be scared away from the undertaking because you may have read somewhere that this, that, or the other condition, which you found it impossible to comply with, was absolutely essential to success. Unfortunately, some of our writers about these matters are given to describing in detail their own methods, and assuming that no others can succeed. By way of illustration—and of encouragement to the beginner—I recently found, in an article on starting plants, the statement that if a temperature never below 60° and never above 80° could not be maintained (in the room where seed-boxes were to be placed) it would be best to wait until such a temperature could be had. Such a temperature may be preferable, but it is not by any means essential. In fact, I am inclined to believe the beginner, who has not yet had a chance to learn the amount of ventilation, moisture and care which such a degree of warmth makes necessary, would have better success with the ordinary vegetables in a cooler place. One spring I started thousands of plants in an old leaky greenhouse where the temperature at night on several occasions went down to 34°, and frequently at noon climbed to 100°, and yet the plants came through finely. Of course this was going to the other extreme, but it shows what can be done.

So if you have a bright sunny room, where the night temperature is never lower than 40°, and if you have decided that you will attend to your seed-boxes properly

Fill the flats with one part garden loam to one part leaf-mold, adding enough sand so that the mixture will crumble apart after being squeezed in the hand

and regularly, you may safely go ahead with the assurance that your efforts will bring success.

There are three things you will want in the way of accessories. First of all, your seed-boxes, or "flats," as the florist terms them. These are open wooden boxes three to four inches deep, and of any convenient size. For a small garden such as the one we planned in the last number, one or two dozen will be a great plenty, and the easiest way to get them will be to have your grocer bring you a few soap or cracker boxes, with the tops. If you can, get them

After sowing the seed either in rows or broadcast, sift over them enough fine soil to cover them to a depth of two or three times their diameter

all the same size. Saw these up lengthwise into three-inch to four-inch sections, and bottom each, being careful to draw out beforehand any nails or wire staples in the way of the saw. Bore or knock a few small holes in the bottom of each, for drainage, and they are ready for use. Better make them all at one time, and be done with that job. One biscuit-box flat will hold about one hundred transplanted seedlings, so you can estimate how many you will need. It will pay to grow about twice as many plants as you expect to use, so that you can select only the best for your

After sifting the soil covering over the seeds press the whole area firmly with a flat board. A shingle will do, but you can easily make a firming board like this

garden. Next, you will want a sieve, for sifting dirt. If you are so fortunate as to possess an ash-sifter, that will be just the thing. If not, take a small shallow box, and in place of the bottom nail on a piece of wire netting, about four meshes to the inch. Probably you already have a watering-can. Get the finest sprinkler you can for it, or a rubber bulb sprinkler at the florist's or seed store, costing not more than fifty or seventy-five cents.

These three things—flats, a sieve, and fine-spray watering-can—are all you will need in the way of implements.

Next comes the question of soils. I might repeat here much of what was said in regard to temperature, to the effect that the *ideal* soil is not essential to the starting of good healthy, stocky vegetable plants. They will sprout and grow well in any good friable soil which will permit the water to drain through it quickly, and not pack and stay wet. But I shall describe the preparation of the best sort of soil, and the little effort required to make it ready will be well repaid. Take one part light garden loam—the more "humus" (rotted sod and vegetable matter) in it the better; mix with it an equal amount of leaf-mold, chip dirt, or similar material, and add enough coarse sand so that the mixture will fall apart after being compressed in the hand. The leaf-mold may be got in any hollow in the woods, or by any old fence or corner where leaves collect and rot. Or the decayed chips and bark which you can scrape up at the wood-pile will do. Mix and turn your pile thoroughly, and you are ready to sow your seed.

Cover the bottom of a flat with about half-an-inch of coal ashes, chip dirt, or any similar coarse substance. Sift on through the sieve about two inches of your mixed soil. Jar the flat to settle the dirt firmly, and smooth off level, without pressing, with the hand or a short flat stick—say a piece of shingle. Pieces of shingle may also be used to divide the box up into sections, for one-third of a biscuit box flat will give you plenty of seedlings if you require only a few dozen or a hundred plants of each vegetable. This will be better than using three small boxes on account of taking less room and trouble, and "drying out" will not occur so quickly. Now sow your seed evenly on the prepared surface. Don't be afraid to put them in quite thick; they will not all sprout. Press them firmly into the soil with a small flat piece of board, and sift or sprinkle on a light covering of soil, not more than two or three times, in depth, the diameter of the seed sown. Water thoroughly, being careful not to wash the soil, thus uncovering the seed. Give the box a thorough soaking, but stop as soon as the water ceases to be absorbed readily by the soil.

For the next four or five days the seed-box will stand a good deal of heat. Germination will be hastened if you put it on a radiator, or even on the back part of the kitchen range at night—just so that there is not heat enough to rapidly dry out the earth. Watch your boxes closely and, whenever the soil begins to look dried out, give a thorough watering. In four or five days, or ten at most, if you have supplied enough bottom heat, the seeds of cabbage, lettuce, cauliflower, tomato, etc., will be beginning to push aside their earth blanket, or, if they have sprouted evenly, to push up the whole surface in patches, like miniature tents.

From now on your seedlings will want all the sunlight you can give them, and the higher the temperature, up to sixty degrees at night, the better. See to it that the boxes never get dried out. On bright sunny days, for an hour or two in the middle of the day, give them all the fresh air you can. If it is cold outside, be careful not to let it blow directly on the little seedlings. This item of fresh air is of great importance. Stale air will make sickly plants as it does sickly people. Be careful to confine your watering as much as possible to the mornings of bright sunny days. Withhold it altogether during dark cloudy weather, unless the dirt is getting actually dried out, and then give it sparingly.

In three or four weeks or more, according to the variety and the growth made, your little seedlings will be ready to be taken

You can have big early onions by following the accompanying instructions for starting seeds indoors

In watering the flats cover the soil with burlap to prevent washing out the seeds

Include the root crops in your home garden if you can possibly spare the necessary space. Give up potatoes first

out of the box. This will be indicated by the appearance of the third and fourth leaves, which are usually different from the first or seed-leaves. The day before you expect to transplant give the seed-boxes a last good watering.

The job of transplanting is accomplished as follows:

Prepare your flats as before, only in place of the coal ashes, use, if you can obtain it, thoroughly rotted stable manure. (Don't use manure that is at all fresh, as that will heat and kill your plants.) Put a layer of about an inch or so in the bottom of the box, and pack it down firmly. Fill the box level full with the same kind of earth as before. If well decayed manure is not to be had, use a handful of bone-meal, thoroughly mixed into the dirt, for each flat.

The young seedlings should be set from one to two inches apart each way. The ordinary flat, as described above, should hold about one hundred, but, if you can, give them more room, and get stockier plants. In taking the seedlings out of the box in which they have been growing, don't pull them up. Take the fingers, or make a small wooden paddle, and loosen and lift them out, keeping the roots unbroken as much as possible. Make a small hole with the forefinger in the prepared flat, and lower the plant into it, without crowding the roots, with the other hand. It should be set in about half-way up the stem. Then close the dirt firmly about it with the forefingers and thumbs. Properly set, the little plant should stand up firmly, with as little packing of the soil about it as possible When the flat is filled jar the sides to even the little heaps and hollows which will have been left about and between the plants, water thoroughly with a fine sprinkler, and set the box in the lightest, warmest place you can give it. If the sun is very bright, shade the boxes with a single thickness of newspaper

(*Continued on page* xii)

How Shall We Wainscot the Walls?

COMPARATIVE EFFECTS, MERITS, DEFECTS AND COSTS OF BEVELED PANELING, STRIP PANELING AND WOOD STRIPS OVER PLASTER THAT IS PAINTED OR COVERED WITH A WALL FABRIC

BY JARED STUYVESANT

Photographs by C. H. Claudy, M. H. Northend and others

IF the title of this article had been "*When* Shall We Wainscot the Walls?" the text matter might well have begun and ended with the answer "Whenever we can afford it." I have tried hard to think of some room, downstairs or up, or a hall between, that would suffer in effect from the addition of suitable wainscoting, but not one solitary instance occurs to me. Wainscoting seems to be the exception among all features of interior furnishing and decoration, in that it alone can be used to the improvement of a room of any style or type. Even a factor of interior furnishing with as broad a scope as wall covering, does not possess this universal fitness. I can picture many types of rooms that would be better without wall covering; and you will agree that, for example, a study floored with handmade tiles might be more effective without a floor covering, even though Oriental rugs were available. But take any living-room, bedroom, dining-room or hall, whether it be in an English half-timber house, a rough summer camp, a Colonial homestead or in just an ordinary yellow-dog house; can you imagine any one of these that could not be made more attractive with the addition of a suitable type of wainscoting?

A simple and effective wainscoting of battened oak boards

Of course, that word "suitable" is the crux of the whole matter, and also in large part the explanation of the eternal fitness of the wainscot. You would not put an intricately paneled, white-enameled wainscot in a summer shack of battened hemlock boards. Neither would you agree for a

Paneling that involves real joinery is closely associated with Colonial work. The cut-out star is most unusual

The device in the upper square panels of this modern dining-room is stenciled in green and gold. Aymar Embury, II., architect

A very clever semblance of wainscoting has been secured by painting white the plaster between baseboard and chair-rail, and running the upright wood members across

Strip paneling in red oak that has been given a soft brown finish without gloss by means of oil and wax. The wall above is covered with a green burlap. C. E. Barott, architect

moment that a brown-stained series of wood strips over a rough board backing would add to the consistent beauty of a Colonial dining-room. But the wainscot's great merit lies in its adaptability to any environment; it has many strings for its bow. It may be of a material and design in keeping with the most sumptuously furnished dining-room, such as the one illustrated at the upper left corner of the opposite page, or it may be simple enough to be in perfect keeping with an $8,000 home as in the hall illustrated to the right.

In British usage the word wainscot means a superior quality of oak imported for fine panel work. That is the original meaning, from which, naturally, the term came to be applied to panel work of that material or another, applied as a covering to interior walls, but especially when of somewhat elaborate workmanship. Here in America the word is undergoing a still wider stretching, for it is coming to be employed as an equivalent of the word dado, meaning a continuous lower portion of a wall surface marked off horizontally by base and cap moldings. That is, if we mark off the lower portion of our dining-room wall by means of a baseboard and chair-rail, painting white the woodwork and the plaster wall between the two boundaries, we frequently call the result a wainscot. In order to be a wainscot, for the purist, the wall surface between baseboard and chair-rail or cap-molding should be covered with wood. Or, again, we frequently cover the lower portion of a wall with burlap, book linen, grass cloth, or some such fabric of pronounced texture, dividing up the surface so covered by means of a pattern of wood strips, three or four inches wide, covering the vertical joints of the textile with perhaps an intermediate horizontal division as well. It is not wainscoting, literally, but it has much the same effect and it will in all probability be accepted under that term even by the dictionary makers before long.

For your Colonial home there is the good old white-enameled wainscot—a work of real joinery rather than plain carpentery. The panel surfaces are beveled off and the tongue thus made is wedged tightly into the surrounding stile or rail (A *stile* in paneling is a thicker vertical member, as the parts of an ordinary door containing the hinges and the lock. A *rail* is a similar horizontal member.) To give the panel thus mortised in a better finish, a small molding is run around covering the intersection, and neatly mitred at the corners. Of course, the size of the panels, and their shape, depends upon the height to which the wainscot is carried and also upon the length of the wall surface. A very nice judgment is needed to determine upon a proportion of panels that will appear neither too wide nor too long, and at the same time be about the

The most expensive wainscoting of all is made up of vertical tongue-and-groove boards, selected for grain, without strips that might conceal careless joints. Lord & Hewlett, architects

same size as those of an adjoining wall, where a different total length will necessitate a re-division of panels.

Wainscoting of this type is expensive, even though the wood need not be one of the hardwoods. The joinery entails a lot of rather costly labor. Often, however, one can secure the same effect, or an equally satisfactory one, by utilizing old doors (or new ones), laid upon their sides. Many doors have five or six panels of the same size, with a larger rail at the bottom. By sawing part of this off to make it equal in width to the top rail the door will cover the central portion of a wall space. Another similar door, sawed down, will perhaps be enough to piece out evenly at both ends, the joints being covered with a molding or flat strip, and the whole finished with a quarter-round molding along the floor and a cap molding of some sort along the top. I know one resourceful man whose mahogany wainscoting arouses the envy of all his friends. It is made up of magnificent old mahogany doors, picked up at the wrecking of an old New York mansion. One might pay ten times as much as he did for wainscoting without being able to secure that splendid age-toned wood.

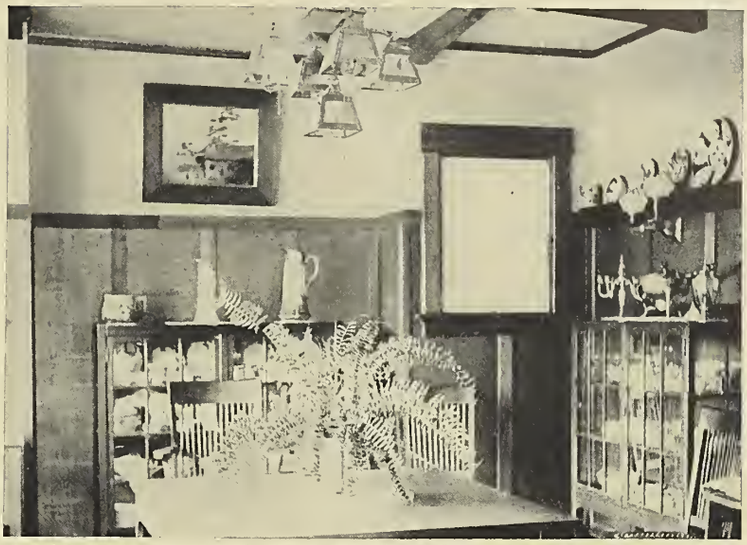
But there are much simpler forms even for the Colonial room. Quarter-inch strips, three inches wide, covering the joints between twelve-inch vertical boards, with perhaps a cross strip to make a row of square panels at the top, will make a very presentable wainscot if properly capped. Such a form may be seen in the middle illustration on this page.

The cheapest of all wood wainscoting is made of ordinary tongue-and-groove pine sheathing, capped and finished with a base. Usually it is built of "beaded" boards, which serves to complete a most commonplace effect. If the sheathing were not beaded, and had a panel pattern of quarter-inch strips laid over it, the result might be not unpleasing, though never so good as wainscoting with solid panels.

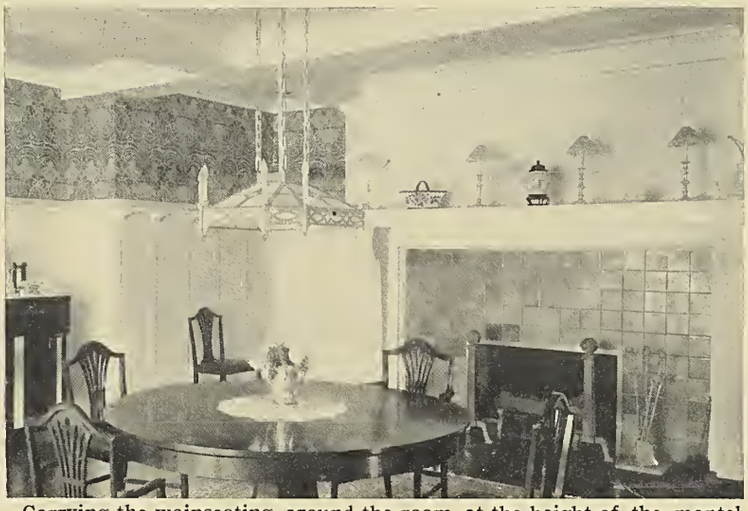
Cheaper still is the effect obtained by using wood strips over a textile wall covering, and though inexpensive, the resulting wall may be particularly harmonious with crafts furniture of oak and a solid-color paper of lighter tone above.

For the summer camp or bungalow an effective and inexpensive scheme of treating the studs that are left exposed inside is to cover the lower portion with plaster board or compo board, over which may be stretched burlap, and upon this a panel pattern of wood strips.

In all wainscoting it is well to carry around some marked line for the top boundary—the line of mantel-shelf or of window-sills. Sometimes the wood covering is carried to the ceiling, but most of us, perhaps, will be satisfied with a less ambitious treatment.



A fairly satisfactory and cheap substitute for wainscoting is secured by putting wood strips over the joints of burlap or other textiles



Carrying the wainscoting around the room at the height of the mantel is effective; the over-mantel paneling adds greatly

In the dining-room at "Fairacres," Jenkintown, Pa., the quartered oak paneling covers the side walls to the ceiling. Wilson Eyre, architect

Over-draperies of linen taffeta or chintz with floral patterns in rather strong colors are always effective in the summer home

Curtains for the Summer Home

WHAT TO PUT UP IN PLACE OF THE HEAVY WINTER DRAPERIES IN ORDER TO GAIN A FRESH COOLNESS IN KEEPING WITH THE WARM WEATHER

BY MARGARET GREENLEAF

Photographs by L. H. Dreyer, H. S. Collins and others

IT is intended in this article to deal with the correct window treatment for homes of moderate cost, giving particular consideration to the simple country house, the mountain bungalow or the seaside cottage.

In deciding upon the window draperies one should view the question from both sides—that is, the effect from the exterior as well as that of the interior. To have the curtains of a material and style entirely suited to the rooms in which they are hung goes far toward insuring success to the completed whole. For many types of rooms the fabric employed for its draperies is of decidedly less importance than the manner in which this is made up and hung. As a rule, it is possible to hang net curtains close to the glass, in which case they show from the outside. Occasionally, owing to the use of inside blinds or some unusual construction of the window, the reverse is the case, but ordinarily it is best to have the general effect of the windows of an entire floor the same.

The pronounced figure patterns on walls and in the rugs make plain window draperies necessary here

If straight hangings of lace or net are used for the living-rooms, ruffled muslin draperies may be selected for the bedrooms. These must be so arranged that a certain uniformity of treatment will be presented in the windows which are in line. Where full-length sash curtains—that is, curtains hung directly against the glass and extending from the top of the window to the sill line—are used these may be of ecru Arabian net of medium mesh and firm quality. They may be simply finished by a two-and-one-half-inch hem at the bottom and the edges completed by a narrow linen tape, fancy edge braid of the same color, or by a narrow hem.

Occasionally a one-inch, or an inch-and-one-half insertion of Arabian lace may be set about two inches from the edge all around, or a corner motif may be used. Such curtains can be

made at home by an amateur—as the material lies straight—if care is taken in the measurements. Remember to allow for the bottom hem and the turn-in at the top to form the casing by which the curtain will run on the small rod.

When the accurate measurements of the windows are secured from rod to sill, the requisite number of inches required for hem and casing must be added. When the material is laid out for cutting, four widths may be carefully basted together, keeping the goods perfectly straight by the selvage and mesh, and pinning with long needle tacks at three corners. It may then be cut, using very sharp shears. All hems should be folded by a card measure and basted. Before stitching the curtain it should be tried on the rod at the window. One-and-three-quarters the width of the window is sufficient allowance for fullness and all ordinary windows should have two curtains at each.

Point d'esprit or small-figured cream or ecru nets make attractive curtains, and scrim, white batiste, or colored and figured madras and silk grenadine are also successfully used. The cost of the Arabian net first mentioned is 90 cents a yard, 108 inches in width. The point d'esprit is 60 cents for 48 inches width, and the other fabrics vary from 25 cents to $2.00 a yard, and in width from 36 to 58 inches.

For the bedrooms, dotted muslin or organdy curtains, ruffled or plain, are dainty and suitable. These may be caught back about the center of each curtain and tied in place by hemmed strips of the material, or with a cotton cord and tassel. In some cases it is more effective to allow bedroom curtains to hang straight to the sill, but these should not then be ruffled. Where no cretonnes or other inside draperies are used, printed muslins showing floral and other designs in charming colors are attractive and very inexpensive.

Among the plain fabrics (other than thin silks) suitable for window draperies, there are crash and linen effects in coarse and fine weave, which come in a full line of colors. There is also a material of coarser weave which is sold under the various trade names of Craftsman, Arras, and Monk's Cloth. This textile is like a thick burlap; it is 50 inches wide, and for door curtains and over-draperies is particularly well suited to houses designed along craftsmen lines. The price is $1.25 a yard. The crash and linen mentioned above vary in price from 60 cents to $1.10 for 50-inch widths.

With plain walls, figured fabrics can be used, or plain curtains with or without border may be equally good. But where the wall covering is figured, plain or, at most, two-tone materials should be always selected; otherwise the effect is chaotic and restless.

This usual treatment of window covering was adopted to shut out an unpleasant prospect

For rooms in which the wood trim is dark in tone and the furniture built on heavy lines, a good choice in figured drapery material is some one of the cotton fabric tapestries which reproduce in soft dull tones many of the most beautiful old-world designs; and if this material is used to cover a davenport and wing chair or to make cushions for the window-seats, it adds greatly to the effect.

Very many people must live in rented houses, and, for this reason, often live with structural effects that are anything but pleasing to them. A frequent fault in the inexpensive house built some years ago was the lack of width in windows and doors, and the too great height of these. Fortunately this fault can be remedied by the arrangement of the curtains. For instance, at a narrow window the rod holding the over-draperies may be set so that it will extend from two to three inches beyond the trim, allowing the curtain to push well back to the end of the rod, thus covering the trim entirely. A valance, from eight to ten inches deep, can be used to complete this and will be found to take decidedly from the apparent height of the window, while the width is materially increased. Nothing is taken from the light as these heavy curtains practically end where the glass begins. A similar method can be followed for door curtains with good results.

(*Continued on page* xiv)

Dark blue draperies accent the blue-and-white color scheme and are kept narrow so as to insure a sunny dining-room

One can never go far wrong in choosing fish-net for the living-room windows, hung in straight lengths

Emerald Gem
The favorite early variety

Mary variety
Muskmelons of this sort are susceptible to disease

Cosmopolitan
An excellent green-flesh melon

The Whole Art of Growing Muskmelons

HOW TO SELECT AND PLANT THE MOST LUSCIOUS MELONS FOR AN ADEQUATE FAMILY SUPPLY THROUGHOUT JULY, AUGUST AND SEPTEMBER—STARTING THE SEEDS INDOORS

BY DR. C. D. JARVIS

Of the Storrs Agricultural Experiment Station

Photographs by the author

Tamping manure in the miniature hotbed

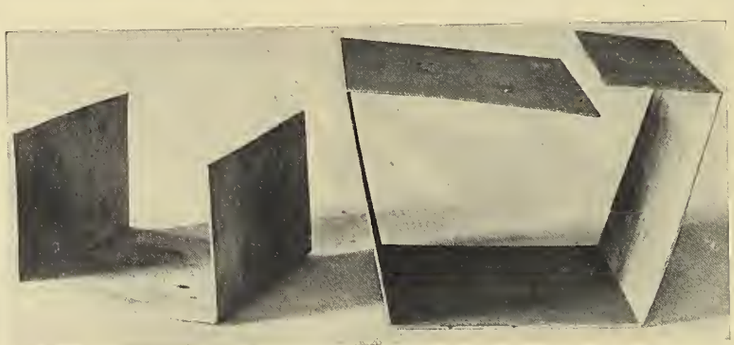
TWENTY-FIVE square feet of ground will grow all the muskmelons the average family can eat. The amount of labor involved in their growth is small and the pleasure great. Melons commonly found on the market are green when they are picked and for this reason are often "dry" and lacking in flavor. The home-grown melon may be allowed to ripen on the vine, adding greatly to its quality, both in juiciness and flavor. Market melons, also, are usually of the more productive varieties, which, as a rule, are inferior in quality. The man who grows his own melons may select the kinds he likes best and he may have a succession of varieties so that he can go out to his garden any morning during July, August, or September, and find four or five fine, fresh, juicy melons. Those who have not waded through the dewy vines and scooped the inside out of an Emerald Gem muskmelon before the sun has warmed it up, have only a faint idea of real melon quality.

In view of these facts, is it not remarkable that so few people grow their own melons? There are many people who believe that muskmelons are unfit to eat. The writer during the past summer convinced many such people that melons were not only good to eat, but that when the right kinds were chosen and taken at the proper time, they were among the most appetizing and delicious of fruits. These people had vivid recollections of once getting from the store some tasteless things called melons, of using a great deal of sugar or salt in their efforts to make them palatable and finally relegating them to the garbage barrel.

To grow early melons and also to lengthen out the season for the later varieties, especially in the North, the plants must be started inside. The seed is started in plant-boxes or modified berry-boxes. These are made from veneer material which may be purchased cheaply in the "flat." This material is partially cut so that with the necessary form, as shown in the illustration, they may be readily folded and tacked into shape. Two pieces, one for the sides and another for the bottom, are necessary for each box. The common berry-box will answer the purpose very well, but a larger box is better. One box is needed for every hill of melons that is required.

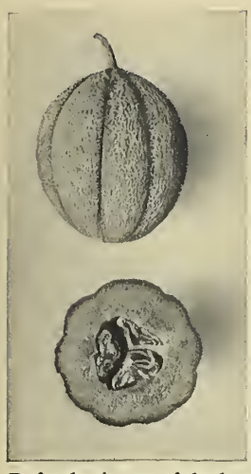
The boxes are placed side by side on a table or bench and filled with stable manure that is just beginning to ferment or "heat." The manure is then packed down, leaving the box about half full. Then the boxes are filled up with a moderately light soil, that is, one containing a large proportion of sand. After standing for a few days to give the manure time to heat up, the seeds may be sown by simply pushing them into the soil with the end of the finger. Although only two good plants are needed

Five-weeks-old plants, with box removed, ready for the garden



Wood veneer material from which the boxes for starting muskmelons are made

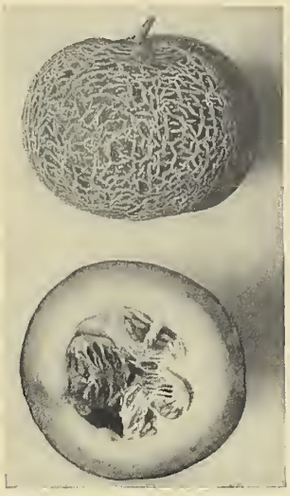
Seed-boxes are readily made on a block form



Defender is one of the best colored-flesh mid-season varieties

Banquet is a comparatively small round mid-season melon

Among the late crop varieties one of the best is Osage



The Superior is a late crop green-flesh variety

Eden Gem is a favorite green-flesh variety

for a hill, it is well to use four or five seeds to allow for the failure of some to germinate. If more than two grow, they should be pulled out to give the others a better chance.

The boxes are then placed in south windows or, if there are very many, in a hotbed. Each box, it will be seen, is a miniature hotbed, so very little extra manure will be needed in the ordinary hotbed. If manure to a depth of six or eight inches is placed on the bottom of a hotbed, there will be no danger of freezing. The boxes are placed directly on the manure. A coldframe, with the required amount of manure, will answer just as well, for the plants will only need an eight or ten inch space between the top of the boxes and the glass.

By utilizing a storm sash from the house, a suitable hotbed may be readily made with boards a foot or more in width. It is not necessary to make a deep pit in a hotbed for this purpose.

After the boxes are placed in the hotbed or in the window, as the case may be, they should be given a liberal watering. Except for watering and ventilating no further attention will be necessary until the plants are ready to transplant. At this time the only point to be observed is to avoid over-watering. The manure at the bottom of the box will hold a large quantity of water, and, although the soil may seem dry on top, the plants should not be watered unless they should begin to wilt. On bright sunny days the temperature under the glass is likely to go too high, and to avoid this, the sash should be raised a few inches at the higher side of the frame. Later in the season it should be removed entirely on warm days.

The time for sowing the seed varies in different sections, but as a rule it should be done about five weeks before planting time. In the North it is sown about the middle of April. The important point is to sow the seed just early enough to have the plants at the early running stage at planting time, or when all danger of frost has passed.

Another method is to plant the seed on inverted sod, cut in squares of about six inches on a side and placed in the hotbed. After dropping the seeds on the sod, about a half-inch of soil is spread over them and they are then watered. The sods may then be handled in much the same way as the boxes, but the latter are decidedly more convenient.

TRANSPLANTING

The warmest, lightest and best drained soil in the garden should be selected for melons. If there is nothing but heavy clay soil in the garden and if only a few hills of melons are required, the soil may be improved by mixing with it a few shovelfuls of sand to each hill. If some well rotted stable manure is available, a forkful may be placed under every hill or mixed with the soil.

When the ground is ready, the plants are watered and taken to the garden in the boxes. The boxes are torn off without disturbing the roots and the block of earth holding the plants is set into the ground. By transplanting in this way, the plants receive no setback and continue to grow unaffected by the change in location. Melons are usually planted in hills, six or seven feet apart each way. The vines may be kept within bounds by "pinching back" the runners.

Further treatment in the garden consists simply of keeping the soil well stirred up around the hills. If really fancy specimens are desired, it would be well to place the developing melons on shingles and turn them over occasionally.

THE BEST VARIETIES

There are probably one hundred distinct varieties of muskmelons catalogued by seedsmen in this country and many of these varieties are known in commerce by several entirely different names. With such a maze of names and with such meager catalogue descriptions, the grower usually finds it difficult to make selections.

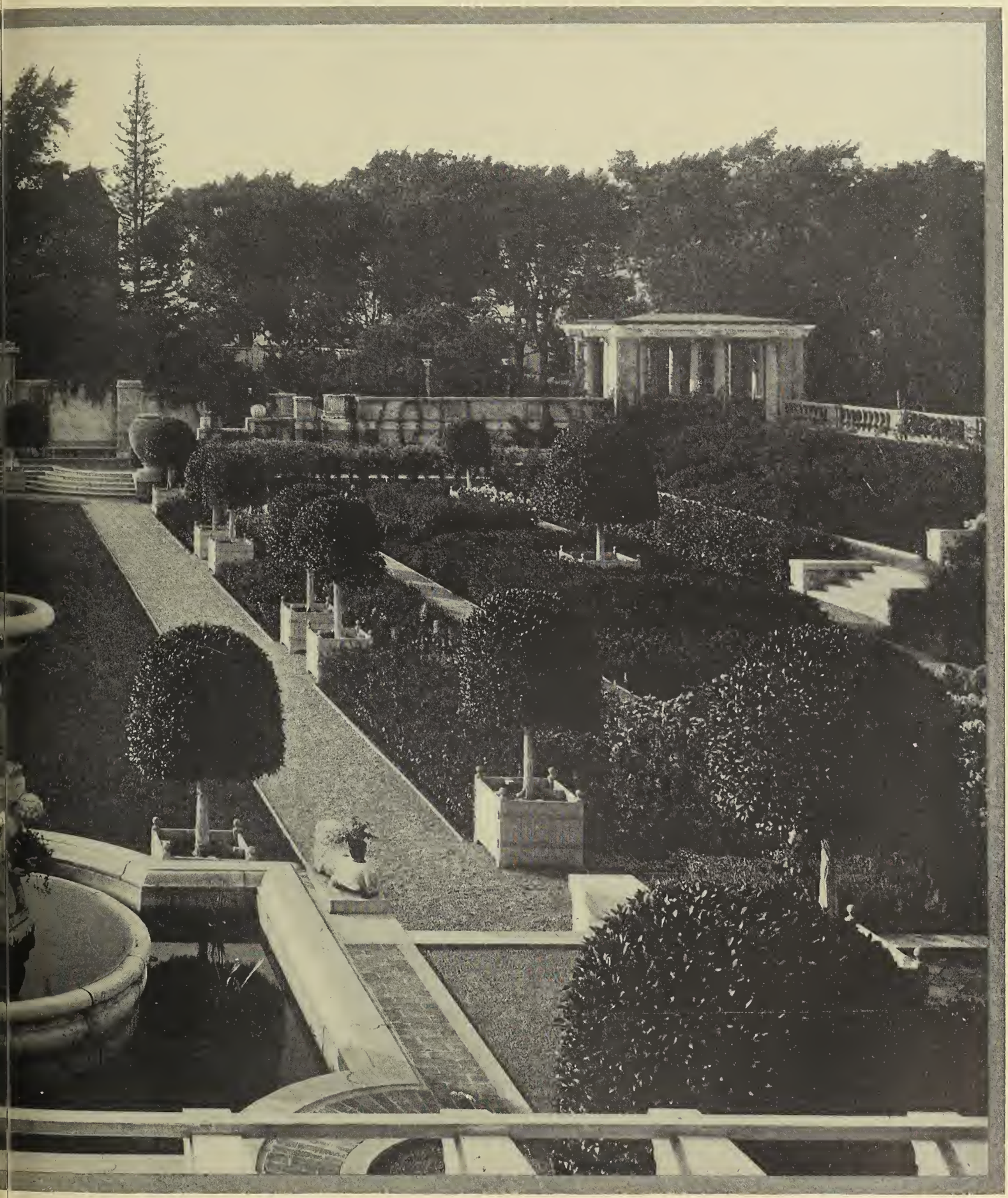
For early use the well known variety Emerald Gem is the favorite. This variety has a smooth skin, colored flesh and a rich musky flavor. For those who prefer a green-flesh early variety, the Eden Gem is recommended. The latter variety is also known as Buskirk and Sweet Air.

For midseason, there are a great many choice varieties. Probably the best among the colored-flesh sorts are Grand, Banquet, Christiana, Defender, and Paul Rose. The last two are very similar, but the Defender has the advantage in having a thinner rind. The largest of these is the Christiana, followed by the Grand. The variety Banquet is a small round melon, beautifully netted and of high quality. Banquet, Defender and Paul Rose are about the right size for cutting in halves when serving. For green-flesh varieties may be mentioned Pineapple, Nutmeg, Cosmopolitan and Jersey Belle.

For the late crop the best varieties are Osage and Burrell Gem among colored-flesh varieties, and Montreal and Superior among green-flesh sorts. The Montreal is very large and, when well grown, will weigh from fifteen to twenty pounds.

American seedsmen offer somewhere near a hundred varieties of muskmelons, and every year foreign varieties are being added to American lists. Therefore the enthusiastic melon gardener has an opportunity of making as many experiments as he choses, in addition to the "tried and true" varieties in his previous experience.

THE GARDEN OF WELD ON THE LARZ ANDERSN



A E, BROOKLINE, MASS. Chas. A. Platt, architect

THE GARDEN OF WELD ON THE LARZ ANDERSON ESTATE, BROOKLINE, MASS. Chas. A. Platt, architect

Practical Talks with Home-builders

THE GREAT PROBLEM OF EXTRAS AND HOW TO AVOID THEM—PROVIDING FOR SCREENS, STORM SASH, HARDWARE, LIGHTING FIXTURES, SHELVING AND SUCH THINGS IN THE SPECIFICATIONS

BY ALEXANDER BUEL TROWBRIDGE

[This is the fifth of a series of intimate helpful talks with those who are about to build. The aim is to offer untechnical suggestions to prospective home-makers in the hope that many of the common mistakes and difficulties may be avoided through foreknowledge. The talks are written for those of moderate means rather than for those to whom economy is no object.]

MANY a home-builder, entering upon a building project for the first time, is not fully alive to the need of good business methods and habits in his dealings with architect and contractor. There are many occasions when misunderstandings arise which may be avoided through very simple means. The most frequent cause of trouble is due to the fact that instructions are given verbally by the owner to the architect, over the telephone or in office conversations. If instructions could always be in writing and the owner could retain a copy, the chance of trouble would be reduced to a minimum. For women, this requirement would be not only irksome but often impossible of fulfilment. The best way to proceed, in case the owner finds it impossible to keep a record of his instructions, is to always request the architect to confirm a telephone message, a conversation or even a written communication, by letter as soon as possible after the receipt of instructions. This increases the work for the architect but he would generally prefer to add to his labors if by so doing he can feel in perfect accord with his client and place himself on record regarding his understanding of his client's wishes. Sometimes a client is disappointed because a certain finish or a color is not what he expected. There is one good way to guard against this difficulty and that is for the owner to request samples and to sign his name on those which he wishes to have followed. If the finished result is not like the sample, the contractor will be obliged to do the work over again.

The question of extras is of great importance and, rightly handled, may present little or no difficulty. When the time comes to sign plans and specifications, it would be well if the owner would ask the architect to give him a list of the items that have not been included in the contract, but which are usually a necessary part of the equipment of a comfortable home, such as: blinds, storm sash, screen doors, screens for windows, awnings, flower boxes, hanging shelves in cellar, hardware, lighting fixtures, kitchen range, laundry stove, water heater, mantels, tinting, wall-papering, etc. These are the principal items that are quite frequently omitted from the specifications. It is perfectly legitimate to leave them out, provided the owner has taken them all into account and knows approximately what they will cost.

The writer believes the better way is to include them in the specifications and obtain estimates covering every necessary item. If, then, the estimates are high, omissions can be made to reduce the cost. It is well known that loosely drawn specifications will secure low bids. The estimators see at a glance that there will be a large bill of extras and they plan to make their main profit in that way. They do not feel responsible for the loose specifications and they do not feel called upon to advise the owner to the disparagement of the architect. Specifications are much more important than owners generally realize. Drawings occupy his chief attention and when the bulky sheets of typewriting are put up to him for approval he very naturally is inclined to feel that here is a technical side of the subject of which he knows nothing and which he is entirely willing to leave to his architect. It is not necessary for the owner to read the specifications with the intention of criticising the phraseology or the technical points. If he is a lawyer he will possibly run over the pages to test their legal strength. If he is an engineer or a builder he will possibly wish to see whether his architect has followed the prevailing customs regarding methods of construction. But the chief reason why an owner should study the specifications is to ascertain what omissions, if any, have been made. Although the specifications may have been written with great care, extras may easily arise through the wish of the owner to change the building more or less radically, during construction. Such changes should be ordered by the owner in writing and he should keep a copy of his order.

In the case of hardware and lighting fixtures it is not feasible to list them in specifications in such a way as to secure a final estimate of the cost upon which a contract may be signed. A very common practice is to insert an allowance in the specifications. For example, the architect can estimate approximately the cost of hardware and state in the specifications, "Contractor shall allow the sum of ——— dollars for hardware." The specifications usually list all common building hardware and state that the above sum is for finishing hardware only. The owner and architect visit the hardware show rooms and either have a competition among several companies or make a selection outright from one company, adjusting the cost with the contractor in case the allowance mentioned is more or less than the final cost.

In the case of lighting fixtures a good way to proceed is to decide upon a sum, for example $400, to cover the cost and installation of fixtures. Then invite several companies to take from the plans a list of the light outlets and to propose or exhibit to you the best selection they can offer for $400. This places the competition on a basis of quality rather than price. If the cost is all important the owner will not feel like following the above method but will prefer to invite several companies to compete on price. It is sometimes difficult to obtain good results through competition in price. The writer has known of instances where an over-zealous salesman has submitted a bid that was too low, leaving to his factory associates the problem of making a selection which would avoid a loss to the company. These factory officials may perhaps have believed, from the low estimate, that the owner had agreed to accept "seconds"—*i. e.*, goods that are strong and serviceable but having slight flaws in appearance. In this way much trouble occurs because the architect is obliged to refuse to accept the seconds, they must be crated and sent back to the factory and, after a long delay, the owner receives what he contracted for. All this can happen without the general contractor being in any way to blame. The selection of goods that are furnished by a sub-contractor is usually made by the architect and owner dealing directly with the manufacturer or his agents. The moral of all this is that the lowest bid is not always the safest to accept. Trouble may be largely avoided by limiting the bidding to only first-class contractors and by requiring the successful general contractor to submit the names of his sub-contractors to the architect for approval.

The Toad as a Garden Benefactor

THE HOMELIEST MEMBER OF THE ANIMAL KINGDOM, WHO IS WORTH HIS WEIGHT IN GOLD AS AN ASSISTANT IN THE GARDEN

BY A. C. WORKMAN

Photographs by Ella M. Beals

English gardeners import toads by the bushel to keep down injurious insects

Give the toad a bath-tub and a shelter from the mid-day sun for your garden's sake

THE common toad, proverbially the ugliest animal form in nature and bearing the burden of many superstitions, is one of the most important animals we have, considered on the side of public economy and judged by the standard of good works.

The American farmer and gardener have innumerable enemies to contend against; probably those assailing their crops and gardens in greatest numbers are the insects. While no actual statistics of the aggregate of annual losses due to insects are obtainable, it has been estimated that they cause from three to four hundred million dollars' damage annually. More than half of this loss might be saved by utilizing as a beneficent force this common toad that nature has provided as an efficient check on insect increase. The services that this much-despised animal renders are only beginning to be recognized, but will be more appreciated when the popular superstitions concerning it are accepted as fancy, rather than fact. It has been proved that the toad possesses no venomous qualities, no medicinal virtues; and the common belief that the toad produces warts is likewise a myth, having no foundation in fact.

Possessing no beauty of form or color with which to win its way to popular favor, the acquaintance of the toad must be sought for other charms than those of beauty. One friend of this animal tells us that he "picks up a toad a hundred times a season just to enjoy looking at its eye—a living, sparkling, ever-changing jewel—and his music in the springtime brings a pleasure that nothing else affords." The lover of nature finds the greatest interest of the toad in its development and habits. Zoologically, no animal has a development better adapted for study.

After a winter spent under rocks, rubbish, boards, or hidden some distance below the surface of the soil, the toads bestir themselves, crawl out of their winter quarters, and begin their annual migration to the breeding ponds. "That tremorous song of the toad," that Hamilton has described as the "sweetest sound in nature" is soon heard, and a visit to the pond will disclose the source of the music, for there will be seen hundreds—possibly thousands—of toads paddling about in the water, the males trilling at the top of their voices. These "cheeriest wedding bells of the season" are heard only for a few days.

An almost incredible number of eggs are laid by the toad. Dr. Hodge, of Clark University, is authority for the record of 5,787 and 11,545 eggs obtained from two toads. These eggs are about the size of a small pin-head at first, black above and light below, and are laid in ropes, enveloped in a gelatinous covering that swells when it comes in contact with the water, forming a mass considerably larger than the parent toad. The eggs hatch in about two weeks, and the young tadpoles begin at once to feed greedily upon the gelatinous substance, then begin to eat the deposits of slime on the surface of the pond.

This habit of eating the slimy growths from everything in the pond, keeps the water as clear as crystal, and has made toads known as good scavengers; it also recommends them for the purpose of cleaning surface waters during the spring, especially such waters as have been used for the dumpage of city waste.

The tadpoles grow rapidly, and in a few weeks the hind-legs appear, the fore-legs develop, the tail is absorbed, and in less than two months after hatching, the little toads emerge from the water, rarely ever returning except for a few days at the mating season. It is said that the adult toads generally return to the pond in which they were hatched to lay their eggs. The question might be asked, why is it that, laying thousands of eggs a year, the species does not increase more rapidly? It is known that practically every egg in the laying hatches, but from the time the tadpoles are formed until they leave the pond they are preyed upon by their enemies, the fishes, ducks, turtles, newts, and water-beetles. On leaving the water, the young toads are killed by ducks, hens, geese, guinea fowl, and snakes; while the adults are delectable morsels for many birds.

In addition to those destroyed by their natural enemies, large numbers of the toad are killed annually by man; lawn-mowers, wheels of vehicles, and the burning of lawns and fields, being the usual methods of slaughter. The greatest charge, however, must be made against the small boy, who, from curiosity, cruelty, or other desire for wrongdoing, kills the toads by thousands every spring on their way to or from the breeding ponds. Dr. Hodge states that one spring he counted two hundred dead, mangled, or struggling toads around one small pond; and the following day he learned that two boys had killed three hundred more. It is probable that this wholesale killing of toads will continue until boys understand the valuable service the animals render, and that they deserve protection.

The old superstition that the toad produces warts is absolutely without foundation in fact

The toad has neither ribs nor teeth. Its tongue is free behind and attached in front, making it possible to catch insects with great rapidity, almost with sleight-of-hand magic. Only moving insects tempt this little animal's appetite. Its capacity for worms, snails, crickets, grasshoppers, spiders, cutworms, potato bugs, and thousand-

(*Continued on page* xv)

For an inexpensive entrance this fence of rough, green stained boards, relieved by the white lattice and arch, is excellent

Brick piers are more costly, but also more durable than wood work; the caps may be of stone or cement

Garden Entrances

THE NEED FOR SOME ARCHITECTURAL FEATURE TO MARK THE WAY THROUGH THE GARDEN BOUNDARY, WITH SUGGESTIONS FROM SUCCESSFUL EXAMPLES

BY ALICE M. KELLOGG

Photographs by M. H. Northend and others

A LANDSCAPE architect, in making a plea for a more general enjoyment of our gardens, apart from the pleasure of gathering and caring for the flowers, gives many valuable suggestions for introducing various accessories for comfort and beauty—summer houses or shelters, decorative enclosures, such as garden walls or fences, appropriate furniture, sun-dials and fountains. Such features as these demand, in a way, a privacy that the average American garden lacks, but which, when secured, is one of the best means for reaching the desired result.

The most enjoyable garden is one which is in some way related to the house but not necessarily shut away from it. A vista, or even a glimpse of flowers and shrubs carefully arranged, adds to the interior delight of a home during the summer months and when such a view is focused through an archway or gate its value is very much enhanced.

"A garden through whose
latticed gates
The imprisoned pinks and
tulips gazed."

To complete the effect satisfactorily some objective point may be made with a sun-dial and its pedestal, a sheltered seat or a picturesque summer house.

The importance of the entranceway, by itself, is too little considered in the making of a garden. If it is not allied, by suggestion at least, to the architecture of the house, and if it is not placed with regard to the fixed lines of pathways and fences, it stands as "an alien object in a foreign land."

The entrance to a garden need not be on an elaborate scale to meet the requirements of out-door art. Simplicity of line is a practical advantage, especially during the summer months when the support is clothed with verdure. A material of considerable durability is required to sustain the vines, and a framework substantial enough to appear well when cold weather withdraws its coverings.

An entranceway of "Chelten," near Jenkintown, Pa., Mr. Wilson Eyre, architect. The columns are roughcasted in maroon and buff, the roof of red tiles

Rustic work suits various kinds of surroundings on a plain or a more expensive scale. It may be successfully employed near a country house of stone and shingles, a clapboarded suburban dwelling, a mountain camp built of slabs, or a seashore cabin of primitive architecture. The old practice of leaving gnarled and unnecessary bits of twigs on the unpeeled trunks as a so-called decoration is fortunately going out of vogue and better effects are attained with trimmed lengths of trees.

With Colonial houses the garden entrance may repeat

the white painted exterior, or some detail of the porch columns or capitals.

The first illustration shows an entranceway for a rear garden combined with a fence of unique design. The lower part of the enclosure is made with medium-width boards stained an unobtrusive green and set upright with open spaces three inches wide between. The upper portion of the fence is made of rather closely set lattice work, which is painted white to correspond with the posts and also with the trimmings of the house. Virginia creeper makes a luxuriant foliage on one side of this entrance, and lilies and ferns are grown in the opposite spaces.

It will be readily seen that the charm of such a gateway lies in its suitability to its surroundings and that the opportunity to add to the pictorial aspect of the place has been artistically comprehended.

In many of our country, suburban and even town homes there is a chance to add as a uniting link between the house and garden an attractive gate or entrance. That this opportunity is often overlooked is largely due to the conventional spirit of the times which is as apparent outside of our homes as within.

A green-painted lattice arch spans the marble steps of one of the entrances of the Pickman garden, Beverly Cove, Mass. Little & Brown were the architects

Many people travel through Italy and become, during their trip, steeped in the atmosphere of out-door beauty, but return to live in their commonplace settings, apparently uninspired by their experiences.

The application of Italian landscape work to our own conditions is not intended by this statement to be regarded as the *ultima thule* of the American garden, but attention should be called to the fact that certain artistic principles that are so generously and generally expressed in Southern Europe might serve a deeper, more lasting purpose than the transitory gratification of the tourist's eye.

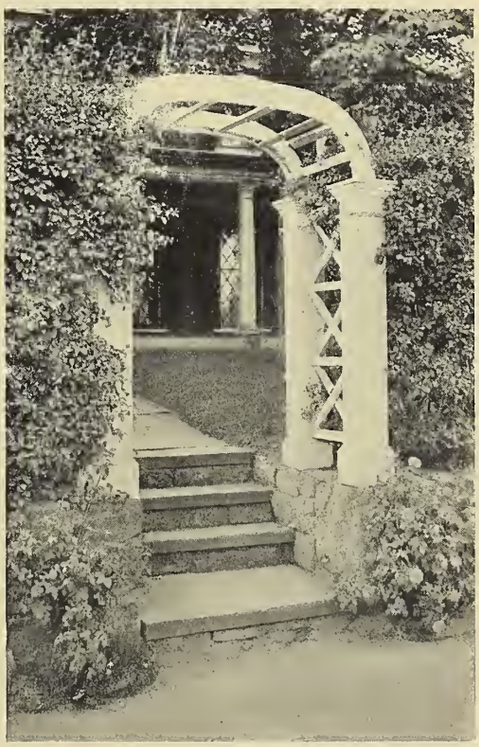
Then, too, the amateur gardener is apt to find so many interesting phases of flower cultivation coming up, that all of his time, strength and ingenuity are expended in this direction and the entranceways are neglected.

In one home, where four generations had planted and tended a flower garden on rather an extensive scale, a small wicket gate had always been the means of entrance until a member of the household became convinced of its ineffectiveness and devised something better. A brick post was placed at either side spanned by an arch of heavy wire. Climbing roses in the course of a few years embowered this simple structure and spread their blossoms, during the season of their flowering, over the framework.

Another expedient of a still less pretentious character was the making of a pair of low posts with field stones, and planting climbing nasturtiums in boxes that fitted the top.

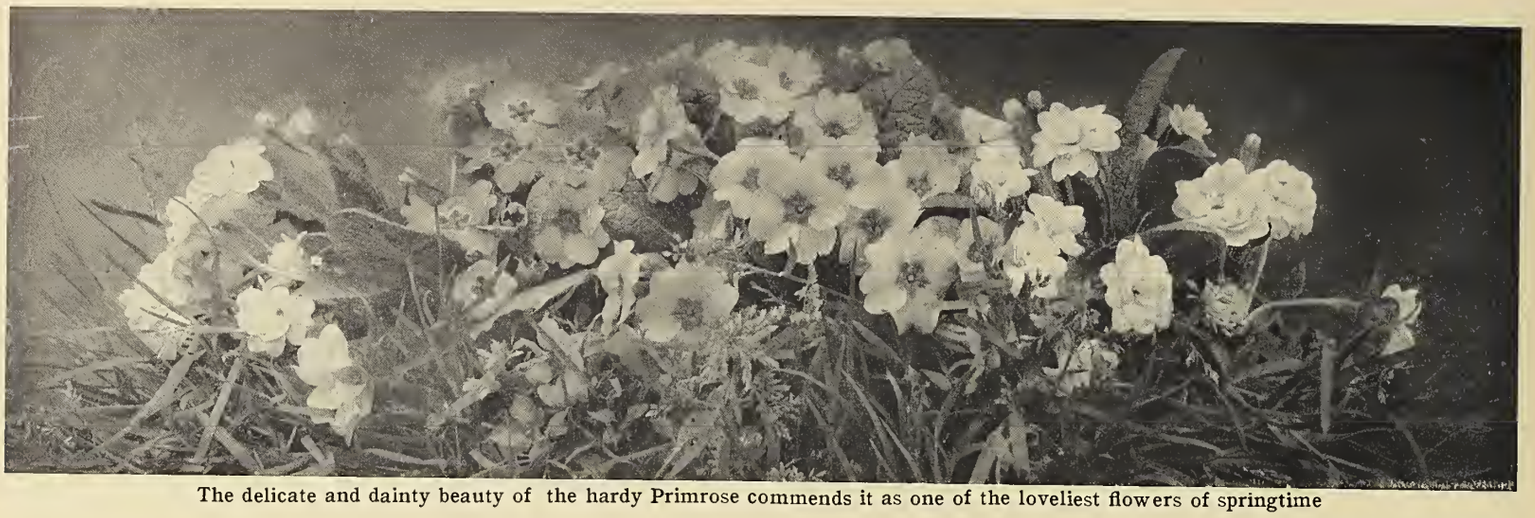
Each in its way suited its position so admirably that it seemed, even when first adopted, to belong perfectly with the general scheme. You may have a wealth of color in your garden, a splendid succession of bloom, but if there is no formal entrance, your garden lacks the one thing that will complete its individuality.

A solid door is unusual in a garden entrance, but it has the merit of holding the view back for a complete surprise



Let the architectural character of the garden entrance always harmonize in color, design and materials with the house itself

For the sunken garden a winding stairs such as this excellent example gives one a variety of views as he descends



The delicate and dainty beauty of the hardy Primrose commends it as one of the loveliest flowers of springtime

Why You Should Grow Primroses

BY ADELINE THOMSON

Photographs by Nathan R. Graves

FOR early blossoms in the perennial garden or border, hardy Primroses give greater satisfaction and pleasure than many other perennials. When most other hardy plants are only putting forth green leaves, the primrose unfolds its happy flowers, and for a month or more scatters cheer throughout the garden in spite of Spring's fickle winds.

Primrose blossoms are extremely attractive in their profusion. In form and size they resemble the flowers of the Chinese primrose (always a favorite house plant) and possess colors that shade from purest white through varying yellows, saffrons, purples and crimson. Their color is wonderfully beautiful when used in mass planting.

There are several varieties of hardy primroses—the Auriculas, the old-fashioned Polyanthus, and the English Primrose. All varieties deserve liberal planting in every hardy garden.

The primrose possesses two characteristics that make it a perfect border plant—its low-growing habit, and its attractive foliage, resisting heat or drought.

Primroses are easily increased by root division. From two varieties which I purchased three years ago I have now over eighty strong, thrifty plants. The roots are formed of many small crowns, which, seemingly, are of but one part. These crowns are easily cut or pulled apart, and each crown planted, no matter how small it may be, will form a new plant. The time for this work is immediately after the plant has finished flowering in the spring. If done then, a single season's offsets will become as large as the parent plant. Choose a shady place for the work and exercise care in pulling the crowns apart. Plant the offsets in a shady location until they have thrown up new, strong growth, then transplant to permanent places.

The old-fashioned Polyanthus (*Primula Polyantha*) is perfectly hardy, blooming in earliest spring

Primroses may be raised from seed, but the young plants require so much care that it is far easier to buy varieties and increase one's stock by root division.

All varieties of hardy primroses should be planted in the spring. By repeated experiments I have found fall planting to be a dismal failure—a fact showing conclusively that primroses must become *thoroughly* established or winter will kill them. The first week in April has proved, with me, an ideal time for this planting. If the plants are in the ground by this time, they will invariably blossom the first season, though the flowers will be smaller, perhaps, and appear a little later than usual. Primroses, however, will succeed when planted any time between the first of April and the first of June.

I find primroses perfectly hardy in a climate where the thermometer often drops low in the zero region, but if given proper winter protection there is no reason why primroses should not thrive in the coldest localities. They should not be covered until the ground freezes. The plant needs the gradual cold of the fall to become hardened. I find my primroses come through winter much better when covered with leaves and coarse litter, as manure is apt to burn the leaves and also starts the plant-growth prematurely. Leaves must be held in place by branches or old boards, to be removed in March. Do not uncover the primroses, however, until early in April or frost may injure the flower buds.

After the long, barren months of winter, primrose blossoms will seem unusually welcome, and while the flowers that follow may appear more beautiful, they never can have quite the same appeal as the hardy primrose. If it had no recommendation but its early and reliable blossoming, that alone would win it favor.

The Daybreak is a quilled variety of carnation hue

The Hohenzollern variety produces beautiful white, pink and lavender blossoms

The Pink Beauty is another variety exquisite in color

Asters for the Million

BY M. A. NICHOLS

Photographs by Nathan R. Graves

THERE has never been a flower garden that has seemed quite complete without Asters. Every succeeding year finds them more sure of their prestige than ever; at least the writer cannot find any flower that has given greater satisfaction in her garden. This has been especially noticeable during the past years when the Asters therein have been planted with regard to massing separate colors, great care being taken with selection.

The varieties selected for last year's garden were so successful that one is safe in recommending them, though there are many others wonderfully beautiful and worth while. The writer's experiment included the large-flowered dwarf White Queen, the peach-blow pink Mary Semple, Truffaut's Peony (glowing crimson), and the rich deep colored Royal Purple. The last three are branching in growth, somewhat later than the Dwarf White Queen, and may be supplemented by Purity, an exquisite branching white variety.

The writer planted seeds an eighth of an inch deep in shallow boxes (flats) indoors the latter part of March, keeping the boxes somewhat cool, and as the seeds germinate in a week's time or so, by the end of May there were splendid thrifty seedlings all ready for setting in outdoor beds.

The soil of these beds had been enriched by a mulch of leaf-mold over the winter, and by early spring was in a fine, mellow condition, just right to nourish the young plants from the start. These seedlings were set six inches apart, in rows one foot apart. Thus there was plenty of room for frequent cultivation and weeding. As it was desired to collect the seed and to insure from season to season thereafter a true succession of bloom, the separate masses of varieties were so far separated one from another as to secure each from contact with the pollen of the other, beyond what might be carried by visiting insects.

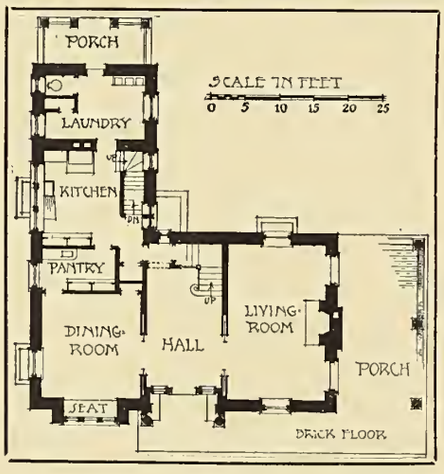
The dwarf White Queen plants came to maturity some three weeks before the others. They were marvels in pristine purity of snowy bloom, growing to a height of fifteen inches, uniformly, and having a blooming season of four or five weeks.

The branching varieties of tall vigorous bush-like growth differed greatly in form. Their extremely large flowers were borne on long upright stems branching out, and were especially fine for cutting. The Mary Semple, a lovely delicate pink, much the shade of the Day Break carnation, was a wonder in the perfection of its double flower. The Truffaut's Peony shared honors with the Mary Semple in all points, and although its crimson blooms were in contrast with the others, they did not, as one might suppose, kill the exquisite effect of their pink neighbors. No such risk could be taken with the Royal Purple variety, however, and the bed containing them was quite remote from the others.

Nearly all branching varieties of Asters continue blooming right up to frost time, if the ravages of black beetles that early commence to chew the petals are combated. This is easily done by watching for the first appearance of these beetles, picking them off into a cup with a pointed stick. It is really wonderful how short a time it takes to keep all your Asters free from these beetles if you go about this task systematically. A few minutes care every few days will protect your beautiful beds.

One of the recommendations for early planting, and therefore for starting plants indoors now is that early plants are not apt to be subject either to black beetle depredations, nor to the mysterious Aster disease which often destroys all the flowers of a bed in a couple of days. A teaspoonful of Paris green in the watering-pot can be sprinkled on the plants at night and early in the morning, which treatment will prove effective. All flowers should be removed as soon as they fade, and beds be freely watered.

The hardy Asters, Michaelmas Daisies, are especially effective for mass planting



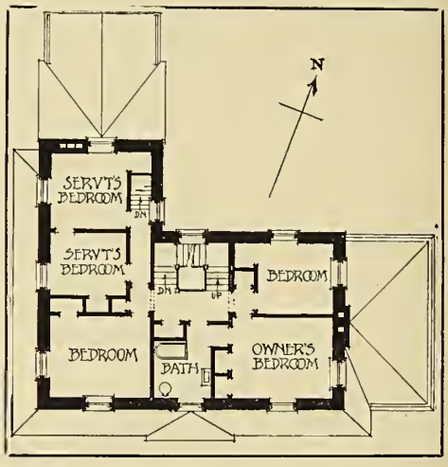
Residents of Germantown and its vicinity are most fortunate in having an attractive local stone, sparkling with mica, which the Philadelphia architects have learned so well how to use with the broad white mortar joints

The first floor plan is of a common type that works out extremely well—central hall, a living-room taking one whole end, and the dining-room opposite, backed by the service wing

On the second floor one door closes off the servants' bedrooms with their back stairway. On the third floor there are two good bedrooms, with closets, a bath and an ample storeroom

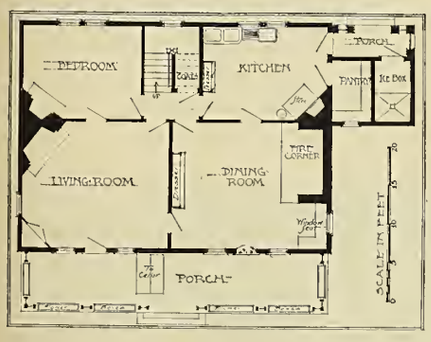
A COUNTRY HOUSE AT WYNNEWOOD, PA.

Mellor & Meigs, architects



The shingled roof sheltering the first-story windows is a feature commonly called the "Germantown hood"

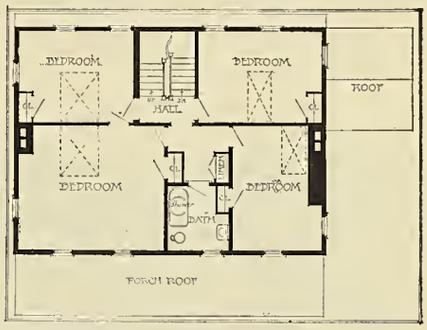
Two built-in seats flank the front door on a brick-paved terrace that is carried around from the porch



A dilapidated wreck of a house that tradition says is 180 years old, and was used by Captain Kidd for many years, has been reclaimed from ruin for a New York bachelor's shooting lodge. Nearly everything but the hand-hewn timbers of oak had to be rebuilt, but the general character of the old work has been maintained

Max G. Heidelberg, Architect

On the first floor the dining-room has an enormous old fireplace with an opening ten feet wide



Before remodeling only one room on the second floor was habitable; the others were flooded by every rain

New hand-riven shingles were put on, and new lattice columns and flower-boxes were added, the latter painted an emerald green

In the old house the second and third story floor beams were never covered by lath and plaster. Mud brick filled the spaces between studs

THE REMODELED HOME OF CAPTAIN KIDD, SEA GIRT, N. J.

Inside the House

Edited by Margaret Greenleaf

The Editor will gladly answer queries pertaining to individual problems of interior decoration and furnishing. When an immediate reply is desired, please enclose a self-addressed stamped envelope

Inside the House

SEVERAL inquiries regarding mirrors as decorative features for the living-rooms of the house have been received by this department, so that it seems well to give a general reply covering these.

Decoratively speaking, the mirror can always find a place where it will add to the beauty of the room. This statement, however, refers wholly to the mirror itself, but as it must have some setting, the frame is found to be the stumbling block to its successful introduction as a decoration. The frame of the mirror must be in harmony with the room, in some degree at least. For instance, a mirror framed in dull gold, in the beautiful acanthus leaf design with the crossed torches at the top, is so distinctly French that it would not look well in a Craftsman room, nor would a plain dark wood-framed mirror, suited to a room of the latter type, be possible in a room of French period decoration. This, however, is so obvious a truth that it seems scarcely necessary to point it, except that unfortunately we sometimes find over-mirrors on mantels made ready to put in place, in which mistakes as flagrant as these appear.

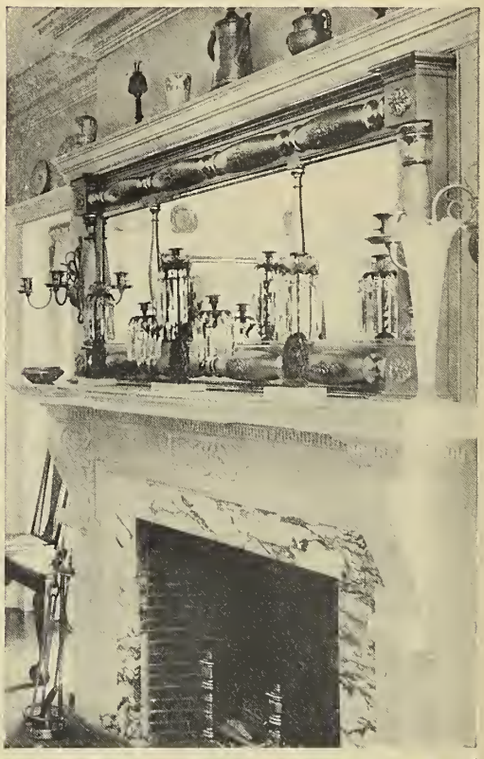
There are several types of three-panel Colonial mirrors, harmonizing well with nearly every style of interior other than Craftsman or Mission

As the mirror is a very usual decoration and completion of the mantel we will consider the style suitable to this first. There is for such a place an accepted type of Colonial panel mirror which may be adapted to many styles of rooms in which the period idea is not necessarily dominant. Indeed, in most rooms, unless they be distinctly on Mission or Craftsman lines, such a mirror can adjust itself agreeably, particularly when the woodwork is of mahogany or has been given an ivory enamel finish. Excellent reproductions of pure Colonial designs may be purchased at very reasonable rates, and in fitting a room one can do no better than put money into a mirror of this kind; the cost is much less than a good picture and the decorative effect often equal to the latter. Also in some rooms the oval mirror can be effectively used over the mantel. This is especially suited to reception or drawing rooms and, if flanked by sconces on either side, provides a complete and dignified over-mantel treatment.

It is much wiser to avoid the over-mantel mirror which is a part of the mantel, as this nearly always gives a commonplace effect. Excellent mantels can be purchased without the mirror, and by adding a very nominal sum to the amount saved on the cost of this mantel such a mirror as described above may be bought. Also there are many beautiful and quaint reproductions of the Queen Anne, the Chippendale, and the Empire designs which can be fitted into any room that will carry successfully a piece of Colonial or French furniture.

In placing a mirror other than over the mantel the vista it will reflect should be considered. By a judicious arrangement in this, the apparent size of the room may be much increased.

Where the woodwork is dark and



One of the later types of old mirrors is used here; it serves to heighten the effect of the old candlestick prisms

heavy and the lines of the room demand the Craftsman furnishing the mirror may be set over the mantel and framed with a perfectly flat border of wood finished like the standing woodwork of the room. Mirrors are only permissible in rooms of this type when framed in some such manner.

In the December number of House & Garden is a very comprehensive article on "Old Looking-glasses" which is fully illustrated and will be found of interest in this connection.

A hall mirror should be simple and so placed as to receive the direct light if possible, so that it will be decorative as well as useful.

There is in New York a wholesale manufactory of mirrors, frames, lamps and shades, sconces, etc., some made of carved wood or composition treated with gold leaf burnished dull. Here one can find the most bewilderingly beautiful reproductions and original designs. This place is unusual not only in the wholly artistic standard it preserves in its reproductions, but also in the opportunity offered the retail purchaser to make selections from the wholesale stock, after which an order for the piece selected may be placed through some firm carrying the goods.

The Dining-room Fireplace and Mantel

WOULD House & Garden advise me about the dining-room of a house I am now building? I wish to furnish this with some good Chippendale (reproductions) furniture I now have, but I do not wish the wood finish to be white enamel as the standing woodwork is of selected birch. I want to make a feature of the beamed ceiling, and also to have a good simple mantel. The room is not high-ceiled, being but little over 9 feet. I have, however, seen attractive and correct rooms with low beamed ceilings.

One of the accompanying illustrations shows a very attractive dining-room which seems to hold the necessary suggestions for you. The mantel shown here is extremely good and you would do well to keep to it, in its entirety. The paneling above the mantel shelf and the plain brick, laid in the white mortar, are convincing and good. Also, if you desire a beamed ceiling you may find helpful suggestions in the one shown here.

A Picture Over a Mantel

I HAVE a very beautiful painting which I would like to use in my dining-room. It has been suggested to me that it would be practical to have this set in the wall over the mantel now in course of construction. I am not quite clear in my mind about how this would look. Would House & Garden kindly advise me in the matter? The subject of the picture is a suitable one to a dining-room and the woodwork in the room is oak. I thank you in advance for any attention you will give my question.

An over-mantel picture is effective, but the woodwork frame should be made for it

The photograph of the dining-room here reproduced shows a picture set over a mantel. While a better example could doubtless be provided, this will convey to you an idea of the effect. If the picture were wider it would be better. There is no more decorative treatment for an over-mantel in a dining-room than the one you suggest, if the picture is a suitable one and the tones are harmonious. We will be glad to serve you further in this matter and if you will send a self-addressed envelope we will write you personally.

Concerning Inexpensive Rugs

THERE are so many really beautiful domestic rugs now made that it is not at all difficult to find suitable ones for the cottage or bungalow, which, together with excellent wearing qualities, will supply the needed color note to the scheme of furnishing.

For the seaside cottage there is scarcely a more satisfactory rug than one of Chinese matting. These are made of twisted straw and in color and design are very pleasing. The queer Oriental figures they show are widely spaced and green, yellow, red, and rich dull blue are each to be found a single color on the yellow-white background of the matting; these cost about $12.00, 9 x 12 size. The fibre matting rugs are also durable, and may sometimes be found in good colors, although these are best suited to porches or to camp use. They may be bought in size 9 x 12 as low as $7.50 each.

Then there is a rug called the "bungalow" rug, hand-woven, of wool, and the line of colors from which one may select is large. In these the two-tone effects are especially good.

Another domestic rug of rich soft pile, good weave, and remarkable wearing quality is made in reproductions of many Oriental designs. Some of these are very beautiful, while those showing stronger colors than the design will carry, should be avoided, but by careful selection in purchasing one of these rugs the result in point of artistic beauty and also in the life of the rug is all that one could ask.

Tiles for the Fireplace

WE are particularly interested in getting some information about tiles for the fireplaces in our new home. I have read what this department had to say about selecting these with due regard to the color scheme of the room. Now for my library I am undetermined about the color. The room is of northern exposure and the woodwork is brown. I may wish to make the walls red, although this is not decided. For the living-room mahogany woodwork is used and I shall probably put a tapestry fabric on the walls. The reception-room has ivory white enamel and paneled walls. These walls may have the panels covered with silk damask, or may be tinted like the woodwork. I would like the den something very unusual, with a tile which would show a completed picture when in place.

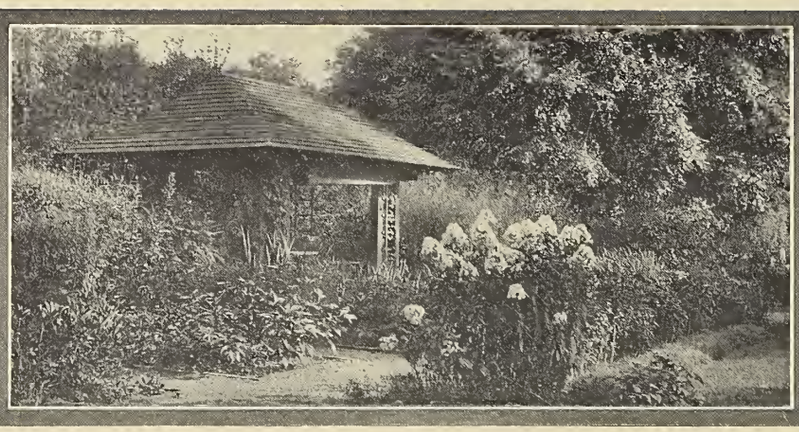
We are glad to know that you are giving this consideration to the color of tiles. This is a question of great importance and one which has not been treated with sufficient seriousness in the past.

For the library we would suggest a dull-finish ecru tile. This will accord with the tint you will in any case use in

(*Continued on page* xvi)

When in doubt what to do over your mantel-shelf, panel it

Garden Suggestions and Queries



Edited By Gardner Teall

The Editor will be glad to answer in these columns subscriber's queries of general interest pertaining to individual problems connected with the garden and grounds. When a direct personal reply is desired, please enclose a self-addressed stamped envelope.

March

THOUGH this be a month of fickle winds, now for the Lion and now for the Lamb, old Sol begins to take pity on shivering things, and though it may not seem to be so, nevertheless the rays of the sun are warmer, and will be beginning to awaken Spring to the busy season before her. Therefore you must make friends now with the Wind, which is to be one of your garden's summer companions. Go into your garden and discover for yourself if at north, east, south or west you should have planted screening trees or hedges or shrubs for protection last year and plan for next season's wind-breaks. Remember, too, fine weather in March and April will almost invariably bring a cold May. Then there are many things that come within the month's province, among them these:

March should bring Winter's good-bye and Spring's first greeting as when the Crocus peeps up through the snow

March Preparations

TAKE a look around the lawn and see what repairs it will be needing, and get out your lawn tools for a thorough overhauling, so you may plan for others you may wish to order.

If you have mulched your lawn the autumn before, remove this mulch the first day the frost leaves the ground otherwise the roots under it will take an unnatural start, which will receive a severe setback by later frosts.

Examine your porch vines and tie them up with new fastenings where needed.

Look over your garden paths and walks and plan their betterment. Flagstone and flat stepping-stones can be employed usefully for these.

You may prune your Hydrangeas, Dogwood and Elders now, and if you have forgotten to prune your grape-vines it is better to do it now than not at all. Hybrid perpetual Roses may be pruned back to one or two feet as soon as frost leaves the ground.

Nitrate of soda as well as common salt will help the growth of your rhubarb and asparagus if put on the beds in March.

By March 15th it will be well to uncover your bulb beds and also your hardy borders.

Put boxes and barrels around your Rhubarb plants after the snow has gone, and put manure over them. At night they should have a top covering.

Sow inside under cover bachelor buttons, calendula, Drummond Phlox, French Marigolds, double Petunias, Lantana, Cannas, Coleas, Heliotrope (for budding out), Ostrich Plume Chrysanthemums and Chaubaud Carnations (for October and later flowering), Ardisia (for bloom next spring, and berry fruit the Christmas after), Dahlias (to flower this season), among other flowers.

Orchard trees may be transplanted as soon as the ground will work up to a fine and mellow soil. They should never be put into a sticky mortar-like soil. Deciduous trees and shrubs may now be set out.

Magnolias of all varieties, hybrid Rhododendrons and Mountain Laurel should be set out only in the spring, and then as soon as the ground may be worked.

Remember that all your spraying should be finished by the middle of April.

Lily-of-the-Valley pips should be started right away, in time for Easter bloom. Your Snowdrops, Scillas, Crocus, Hepaticas, Magnolias and English daisies should be blooming this month. Bring forth the rest of your bulbs from the cellar.

The Lily-of-the-Valley is one of the loveliest flowers for Easter

If you are digging around your garden at any time remember that dug-in snow chills the soil where roots may be dormant, consequently they will be injured or killed by thoughtless treatment of this sort.

Sow lettuce, globe artichokes in cold-frames and hotbeds, beets, carrots, onions, tomatoes, egg-plant and peppers in flats; also thin out those already up which you started earlier.

If you sow parsley now indoors you will have a good April crop. Before planting parsley seed soak it in warm water for a day, as it is very slow to germinate.

If the season is a very early one get your Sweet Pea seeds into the ground early.

Fork asparagus beds lightly. first spreading well-rotted manure or bone meal on the ground.

North exposure window boxes will succeed when properly filled

Window Boxes

WILL you kindly tell me what plants I can grow successfully in window boxes that have a northern exposure? I am not sure of what to plant.

The following list is recommended for your purpose: fancy caladiums, trailing Fuchsia, Maurandya, dwarf Ageratum, Ivy Geranium, Begonia, Manettia Vine, Boston Fern, *Asparagus sprengeri*, *Cissus discolour*, *Russellia grandis* and *Asparagus tenuissimus*.

Liquid Fertilizer

WILL you please give me directions for preparing some liquid fertilizer?

One of the most satisfactory home-made mixtures is prepared with manure from the cow barn—two bushels to fifty gallons of water. And then good liquid fertilizer is prepared as follows:

2 Quarts Water
4 Ounces Nitrate of Soda
8 " Monobasic Calcium Phosphate
5 " Sulphate of Potash.

When using take only one part of this mixture to thirty parts of water, applying once a week. Neater to handle are the prepared fertilizers put up in tablet or powder or liquid forms, which can be obtained through all seedsmen, and are especially convenient.

A Spray for Insect Pests

MY plants suffer from aphides. What is a good exterminator of these pests?

For plant-lice, or aphides, try spraying the foliage with soapsuds and rinsing the plants afterwards, or you may spray with tobacco water that can be prepared from tobacco "stems" which any seedsman can supply. Into a gallon of warm water put a large handful of these stems and let them stand covered for some twenty-four hours.

Overwatering

WHY do the leaves of my house-plants turn yellow and drop? I keep them plentifully watered.

Probably, if the temperature of your room is right, and the potting soil suitable, the trouble lies with overwatering, which tends to sour the soil, causing the leaves to turn and fall, just as underwatering causes them to wilt. More plants are killed by drowning than by drought. The article on Watering Flowering Plants in Pots, in the columns of this issue should prove of especial interest to you.

Smilax

CAN you tell me something about Smilax and how it is best grown and cared for?

The Smilax (*Asparagus medeoloides*, also known to florists as *Myrsiphyllum asparagoides*,) is especially recommended for the window-garden. Moreover, it thrives in more shade than many other vines, and can be put to grow in the less well lighted corners of your window. It will often exceed eight feet in height, but of course requires a string to climb upon. The dark green foliage is glossy and handsome, and eventually tiny single white sweet-scented flowers appear.

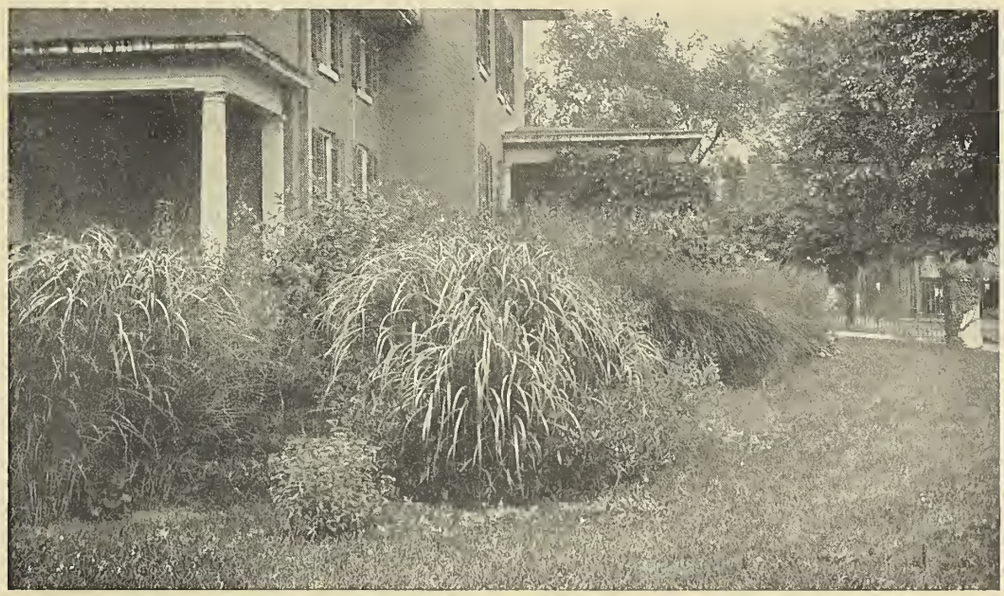
Cyclamens come true to color from seed and one can buy named varieties that can be counted on to reproduce themselves

Cyclamens from Seed

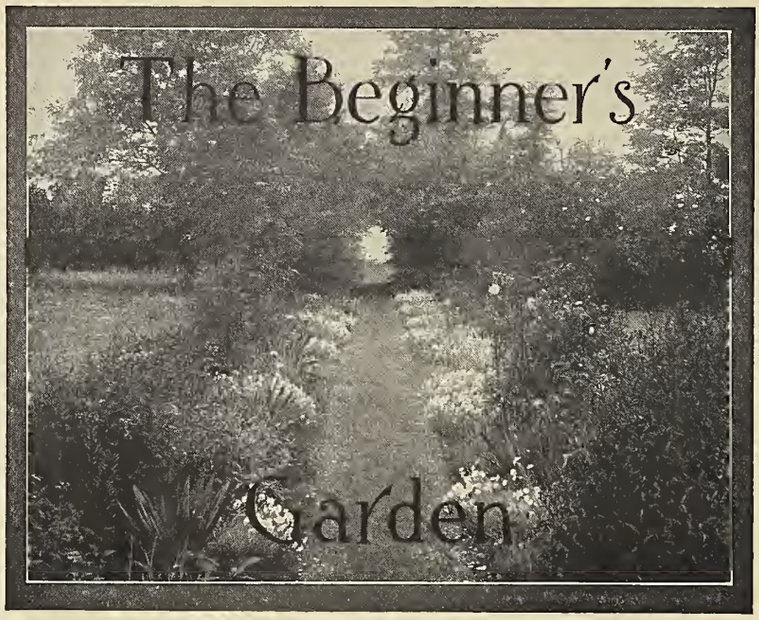
It is always preferable to start Cyclamens from seed to grow on unchecked till the following year. The period of germination is a long one (often six or eight weeks), and some fifteen months are required to bring the plants to free bloom. Old Cyclamen bulbs are not worth keeping.

Ornamental Grasses

Many beautiful grasses may be planted on the home grounds to add to the effectiveness of any place. There are the tall varieties and the dwarf ones, both producing every shade of green, silver-gray, while many of them, such as the old-fashioned Ribbon Grass (*Phalaris arundinacea* var. *variegata*) are parti-colored.



Ornamental grasses, reeds and sedges are useful additions to a lawn's attractiveness.



The Growth of Mature Plants

With the coming of spring a sort of pruning madness gets into the blood, a mania to trim and cut and "tidy up"—and then to go on trimming under the impetus of a blind superstition that in some mysterious way it is good for vegetation to be mutilated. And the defenseless beginner is egged on by countless "hints" in every bit of garden literature that comes to his hand and tempted by the pages of nursery and tool supply catalogues which are fairly gory—I should say sappy—with the illustrations of countless amputation implements, until at last resistance ceases; armed with the hints and the tools he sallies forth—and great is the slaughter of that day!

While there is yet time, be induced to hide the pruning shears, or their enticing likeness in the sales books, from yourself and give attention this month to the fashion of a plant's growth. Sound knowledge of this should precede the cutting of even the smallest twig, just as sound knowledge of anatomy must precede the successful surgeon's work on human subjects. There is nothing to prune until a plant has grown—and not a great deal then, if its growth has been intelligently directed and assisted.

We are accustomed to think and speak of buds as embryonic flowers, but they are a great deal more than that. There are flower buds, leaf buds and mixed buds—that is flower-and-leaf buds—and every branch and limb of the sturdiest tree, indeed even the tree itself, has had its beginning in a bud. They are the source of all growth after a plant is out of the seed.

The tiny plant springs from the seed, broadly speaking, by means of its *terminal bud*, and each year its growth proceeds upward by the formation of another terminal bud during the summer, which crowns its season's work and opens the succeeding year into leaves, possibly flowers and a further growth of stem.

On either side of this main stem, at regular intervals usually, *lateral buds* are formed from which in due season, branches develop. As these commonly rise between the leaf stalks and the main stem—that is in the axils of the leaves—they are called *axillary buds*. They are however the terminal buds of the branches of course; so growth is always carried on, strictly speaking, by a terminal bud.

This leaves a lot of useless buds along every stem apparently, for a very small percentage develop and grow into shoots and of those that do, many die quickly, choked out in one way or another—else there would be as many branches one season as there had been leaves the season before. But these seemingly useless buds are Nature's wonderful reserve, held back for weeks, or months, or maybe years, as the case may be, yet always in readiness to spring to the rescue when the plant's normal leaf surface is taken away, either by accident or design.

For this leaf surface cannot be reduced; the leaves, which spread to the air and light certain substances which the roots have taken from the ground, are as necessary to the plant's life as its roots, and the proportion of leaf surface to root surface must be maintained.

Cut back the branches of privet to induce bushy growth and you will have three branches where one grew before

With wonderful intelligence and patience they wait, these reserve buds, until injury comes to the terminal bud, and then they fairly leap into activity in their haste to supply the loss. The strongest gain the lead, and keep it usually, and thus, the original leading stem having ceased its growth, those branches which spring from the strongest buds in their turn become leaders. Sometimes there are several of these, sometimes only one.

There is a third kind of bud which some trees and shrubs produce in great abundance following injury, and these, rising from anywhere on old branches or out of the trunk itself, are called *adventitious buds*. They simply supplement the work of the dormant axillary buds and hasten foliage renewal when large limbs have been sacrificed and there has been great loss.

Generally speaking the most virile strength of any branch is nearest its tip. Growth proceeds at the apex, with branching growth usually springing from the axillary buds nearest the apex—the upper buds these are called. Removing the terminal bud stimulates the growth of these upper axillary buds—or branches which these may have formed—because the supply of nourishment to that particular stem has then to be divided between only two, while before it supplied three. It is seldom, however, that the removal of the terminal bud alone will induce further branching down a stem—otherwise that form of growth characterized as bushy—though it may sometimes. The severe cutting back of privet in hedges is an excellent example of what must be done to secure dense branching low down on a plant, and it is also an excellent example of what will happen to a plant that is pruned to excess.

Privet usually branches three times immediately below the cut. To secure these branches near the ground, it is therefore necessary to cut it first to within a few inches of the ground, and then to cut these shoots down again pretty close to the parent stem, and so on. This furnishes stocky, stiff plants—just what one doesn't want in flowering shrubs, though it is highly desirable in a hedge.

Removing the first pair of axillary buds will start the next into growth usually, while the removal of buds or small branches down along a stem will stimulate the growth at its apex. In this way a plant's general growth may be directed towards a certain ideal form from its infancy, with never a bit of waste in its vitality or in the time required to arrive at that ideal.

Be in no hurry to prune old shrubs,

(*Continued on page* xix)

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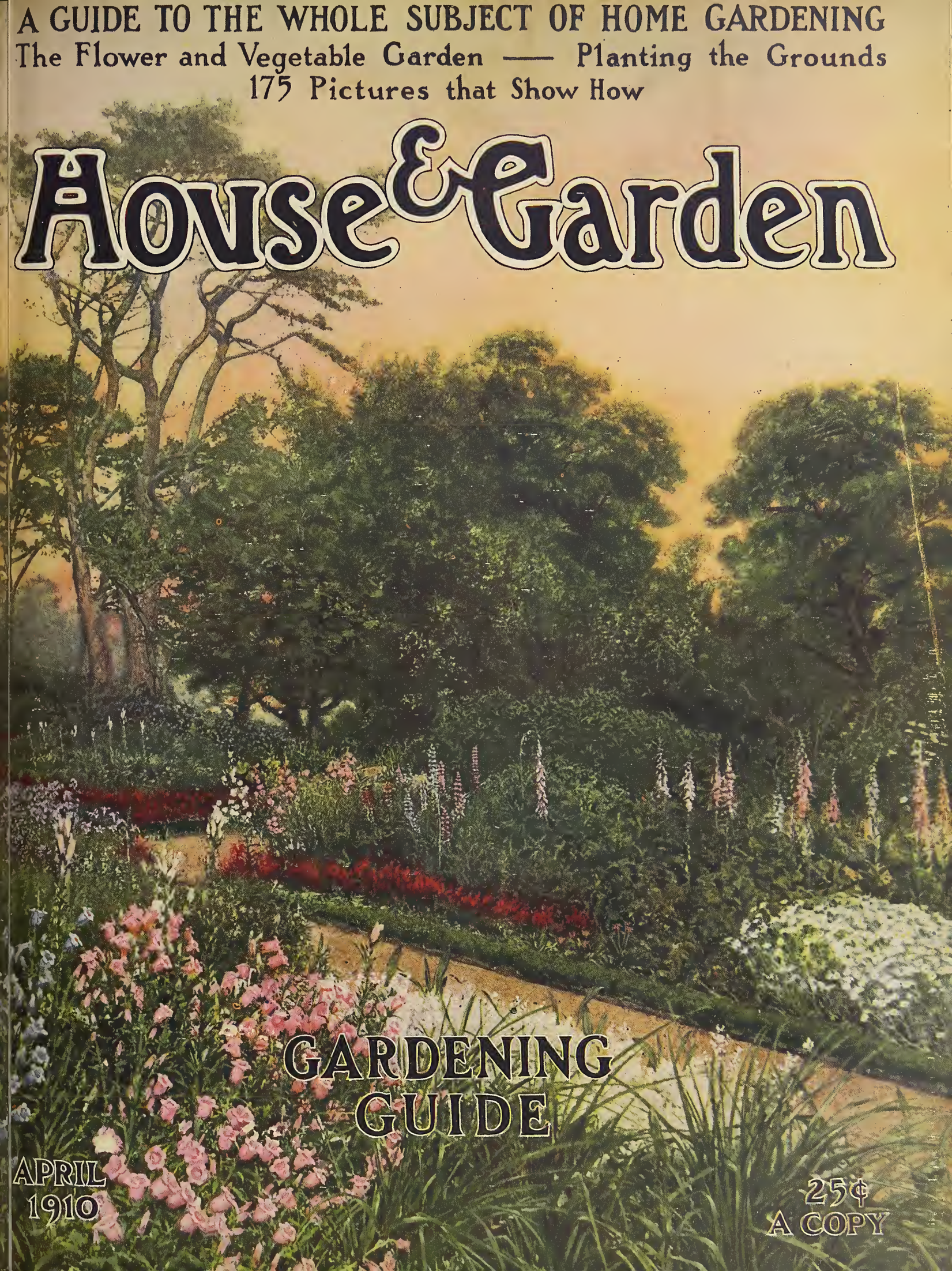

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Contents for April, 1910

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THE HOME OF MISS ALGER AND MISS FULLER, GREAT NECK, L. I., WILSON EYRE, ARCHITECT

A striking object lesson upon the power of vines to give a house that harmony with its surroundings that is the first essential of a home

House & Garden

VOLUME XVII April, 1910 NUMBER 4

A border of fresh blooming Iris is one of the garden's loveliest features

Making a Better Flower Garden

ALL THE NECESSARY INFORMATION, IN THE MOST CONCISE FORM, REGARDING SOIL, PLANTING, FERTILIZERS, AND ALL THE OTHER DETAILS THAT WILL ENSURE A SUCCESSFUL GARDEN THIS YEAR

BY GARDNER TEALL

Photographs by N. R. Graves, H. H. Saylor and others

THE making of a successful flower garden is not a matter to be left to chance, and perhaps it is one of man's inconsistencies that he is willing to dig and delve for a vegetable, while, more often than not, he begrudges the care he should give a Verbena, as though the satisfaction of a sense of the beautiful should not have half a chance with one's appetite. Now there is scarcely anyone who does not care for flowers, although it must be admitted there are many who give them little enough thought. With the first breath of spring, and the return of the birds from their winter holiday, one should feel an enthusiasm for making just as good resolutions as ever New Year's day brings forth. Among them there could not be one more fitting than a resolve to have a better flower garden the coming season. The joy of it all will more than repay the trouble, a thousand times over. If your last year's garden, started without plan or thought, and all in a hurry, was not a success, you can only put the blame upon your carelessness, or to your not knowing how to go about it, if you have not had experience in these matters. In this latter instance the following hints, directions, and tables will be of service in the planting preparations for this season's garden.

Every flower garden should have a sunny position, to the south if possible, and where it may have both morning and evening sunlight. Protection from prevailing winds is always to be sought.

THE SOIL

The soil for the reception of seeds of garden flowers must be carefully prepared. The following directions, if faithfully carried out, will do wonders in helping your flower plants to better growth. Mother Nature's way of carrying seeds hither and thither, to be dropped carelessly in places of indifferent soil, cannot always be imitated successfully. It is all very well with wild things, but garden flowers are another matter altogether. For them proper soil conditions are essential. Annuals especially require an earth

Foxgloves lift spikes of beautiful flowers above the level of the foliage

Pyrethrum, a large daisy-like flower variously colored

Pansies are ever popular and prolific blooming flowers

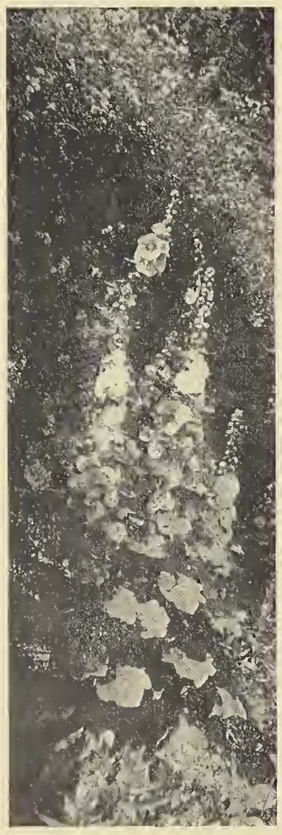
Cosmos, tall-growing and fine for cutting

rich in humus, if best results are to be obtained. Well rotted barnyard and stable manure or leaf-mold worked into the ground, will supply this where the soil is deficient in richness. Without enrichment of this sort soils are given to baking or drying out, which is, of course, disastrous to the growth of all tender plants. When you have chosen a plot for your flower garden spade up the earth to a depth of fully a foot. Work this over a second time to a depth of six or eight inches, pulverizing the surface to make the beds mellow and smooth. Top-soil, being more rich than the earth under it, should always be removed, in making new beds, for replacing later, after manure has been worked into the under soil.

FERTILIZING

The fertility of the soil of the flower garden may be maintained, or increased, by the application of natural and commercial fertilizers. With the former, an ordinary barrowful of manure should be quite sufficient for every ten square feet of garden area. On account of the phosphates they contain, wood ashes tend to sweeten the soil, but they should be applied directly to it after other fertilizers have been worked in, and never mixed directly with them. Manure, for instance, if mixed with wood ashes loses its ammonial value, and becomes far less useful to the needs of growing plants. Soot, mixed with water, forms an excellent plant food for Pansies and Roses, just as ashes do for Asters and Gladioli. Barnyard manure is especially suited to Pansies, Iris, Gladioli, Violets and bulbous plants, and to sandy soils, while stable manure is preferable for clayey soils. As a fertilizer for the Rose garden,

Asters, one of the longest blooming annuals



Hollyhocks dignify any garden

THE BEST FLOWERS

For key to the symbols used, see next page

Key	Plant	Color	Height (inches)	Sow	Depth for Seed (inches)	Distance of Plant Apart (in.)	Blossoms (early and late)	Landscape Use
P	Aquilegia†‖ (Columbine)	Various	12–24	¶May		12	June-July	Mass-border
P	Achillea	Various	12–36	¶May		10	July	Border
P A	Adonis	Yellow	12	March-April ¶ May		6	May-June	Border
A	Ageratum†‖	Blue white	24	May	¼	5	June-Oct.	Mass-edging
P	Anemone†	White to rose	12–36	¶May		12	Aug.-Oct.	Mass-border
A	Aster†	Various	12–18	May	½	12–15	July-Sept.	Mass-edging
A	Bachelor's Button†°‖	White-blue-pink	15–20	May	¼	6	July	Border
A	Balsam	Various	10–18	May	¼	15	June-Sept.	Mass-border
P	Bleeding-Heart (Dicentra)	Crimson-purple	8–19	¶May		24	May-Aug.	Mass
A	Calendula	Orange-yellow	22–24	May	¼	12	June-Oct.	Mass-border
A	California-Poppy	Orange-yellow	12	May	⅛	8	August	Mass-edging
P A	Campanula	White-blue-pink	18–36	May ¶ July	¼	8	June-July	Border
A	Candytuft†	White	6–8	May	⅛	4–12	June-Sept.	Mass-edging
A	Castor Bean	Foliage	60–90	May	¾	36	Foliage	Screenery-ornamental
P A	Chrysanthemum†	Various	12–36	May	¼	18	Aug.-Oct.	Mass-border
A	Clarkia†	White-rose-purple	18	May	¼	8	June-Sept.	Mass
A	Cockscomb	White-red-yellow-purple	6–12	May	¼	8	June-Oct.	Border
P	Coral Bell‖	Coral red	12–30	May		15	July-Aug.	Border
A	Coreopsis†°	Yellow-brown	12	May	⅛	12	June-Aug.	Mass
A	Cornflower†	White-blue-rose	12	April	⅛	8	June	Mass
A	Cosmos†°	White-pink-red	24–72	May	¼	24	Aug.-Sept.	Mass
P	Dahlia	Various	2 to 4 ft	May		36	July-Sept.	Mass
P	Daisy	White-pink-rose	6–8	May		6	May	Edging
P	Evening Primrose	Yellow	60	¶May		10	July-Aug.	Edging
P B	Forget-me-not§	Blue	6–18	May ¶ May	¼	6	April-July	Edging
P A	Four-o'clock°	White-red-yellow	30	May ¶ May	¼	10	July-Aug.	Border
P B	Foxglove§‖	Pink-white	10–36	May ¶ May	⅛	10	June	Mass-screening
P	Gaillardia†	Red-yellow	36–60	¶May		12	July-Oct.	Mass
A	Globe Amaranth†	Pink	18	May	¼	10	July	Mass-border
A	Godetia†‖	Red white	12–24	May	⅛	8–12	July-Oct.	Mass
A	Gourds	Various colored fruits	5 to 15 feet	May	¼	12	July-Oct.	Mass
P	Heliopsis	Yellow	36–48	¶May	¼	8–12	July	Mass
P	Helianthus§	Yellow	2 to 10 feet	¶May			Aug.-Sept.	Ornamental
B	Hollyhock	White to rose-yellow	36–6 ft.	August	In drills ½ in.	12–16	August	Screening
P E	Iceland Poppy	White-yellow to orange	15	May ¶ May	⅛	5	June-Sept.	Mass
P	Iris*	White-yellow-blue	18–30	¶May		8–12	May-July	Mass-border
P A	Larkspur†°	White-blue-pink	12–60	May ¶ May	⅛	6 to 10	June-July	Border
A	Lavatera	Rose	36–72	May	¼	8	July	Screening
A	Lobelia§†‖	Blue-crimson	6–12	May	⅛	3	June-Sept.	Mass-edging
A	Love-lies-bleeding°	Yellow to scarlet	36–60	May	¼	10	June-July	Mass
A	Love-in-a-mist°	White-blue	12–24	May	¼	10	June-Sept.	Border
P A	Lupine†‖	White, blue, pink	12–24	May ¶ May		4	June	Mass

Violets are worth all the trouble one spends to raise them

The gorgeous Dahlia is one of the garden's delights

German Iris should find a place in every garden

Pinks are one of the quaintest annuals

sheep manure is especially recommended. Perennials, of course, are more gross feeders than annuals; hence they require greater fertilizing.

SEED

Good seed is essential to obtaining good plants; therefore select it carefully from reliable dealers who may be trusted to give you fresh packets. Then, having made the topsoil mellow and smooth, sow your seed in drills, always planning to place seeds of the taller plants in the center of the beds or at the back, so the grown plants may not hide those of less height. Nothing is more disappointing, when your garden seeds come to maturity, than to find you have to hunt for little plants behind a thicket of tall ones.

It is a good rule to plant seeds of annuals at about five times the depth of their own thickness, sowing thickly, to be thinned out later. One can never be just sure of the proportion of seeds that will germinate; hence thick planting obviates disappointment.

When the seeds have been sprinkled in the drills (that is the grooves you have made for them in the soil), sift earth over them, after carefully marking both ends of each seed-row with a wooden name label. Then press the soil down over the seed by patting it with the flat of a hoe-blade. As you will have marked your seed-rows accurately, anything growing up between them it will be safe to consider weeds, and all such weeds should be pulled up and burnt as soon as they appear. Nothing so quickly exhausts a soil's richness, and consequently the vitality of tender flowering plants, as do weeds.

The old-fashioned Bellflower or Campanula

FOR SPRING PLANTING

Key	Plant	Color	Height (inches)	Sow	Depth for Seed (inches)	Distance of Plant Apart (in.)	Blossoms (early and late)	Landscape Use
P	Mallow§	Rose-white	18–30	¶May		8	July-Sept	Mass
A	Marigold†°	Lemon to orange	10–24	May	¼	6	Aug.-Oct.	Mass-edging
A	Mignonette*†	Green white	12	May	⅛	6	July-Oct.	Mass-edging
P	Monkshood‖ (Poisonous)	Blue-white	36	¶May		10	July-Aug.	Border
A	Moonflower‡	White	15 to 30 feet	May	½	6	Aug.-Sept.	Screening-vine
A	Morning Glory‡°	Various	10 to 20 feet	May	½	4	July-Aug.	Screening-vine
A	Nasturtium*†‡	Various	1–60	May	½	5–12	July-Oct.	Mass-screening
A	Nicotiana*†‖	White-red	3 to 5 feet	May	¼	8–12	July-Aug.	Mass
P A	Pansy†‖	Various	6	May ¶ May	⅛	7	May-Oct.	Border
P	Peony†	Red-pink-white	24–36	May			May-June	Mass
A	Petunia°	White to claret	12–24	May	Scatter over soil	8–12	July-Sept.	Mass-edging
P A	Phlox†	All except blue & yellow	12–60	May	½	8–12	July-Oct.	Mass-edging
P A	Pink†	White to rose	4–12	April ¶ May	¼	5	August	Border
A	Poppy†°	White to scarlet	6–24	May	⅛	4	July-Aug.	Mass
A	Portulaca°	White-red-yellow	6–9	May-June	⅛	4	July-Oct.	Mass-edging
P	Primrose	Yellow-pink	4	¶April		5	April-May	Mass-border
P	Pyrethrum†	Various	12–24	¶May		12	Aug.-Oct.	Mass-border
P	Rudbeckia† (Golden Glow)	Yellow	60–100	¶May		12	Aug.-Sept.	Mass-screening
A	Salpiglossis	Various	12–24	May	¼	6	June-Aug.	
P A	Salvia†°‖	Scarlet	10–24	May ¶ May	½	5	Aug.-Oct.	Mass-Border
P	Scabiosa†	White-yellow-blue	12–36	¶ May			June-Aug.	Border
A	Schizanthus	Mixed yellow-lilac	24	¶May	¼	8	July-Aug.	Border
P	Silene†	White to rose	3–5	¶May		5	June-Aug.	Mass-edging
P A	Snapdragon†	Various	24	May ¶ May	¼	8	July-Aug.	Mass-border
A	Stock†	White to crimson	18	May	¼	5	June-July	Border
P A	Sunflower§°	Yellow	36–100	May ¶ May	½	24–48	August	Screening
A	Sweet Alyssum†°	White	8	May	⅛	4	May-Sept.	Mass-edging
A	Sweet Pea*†‡	Various	1 to 6 ft.	April	Trench 3	8	June-Oct.	Screening
P B	Sweet William (Dianthus)	White-pink-red	12	May ¶ May	¼	8	July-Aug.	Border
P	Verbena†	Various	5–18	¶May		12	June-Aug.	Edging
P	Veronica	Purple	24–30	¶May		8	August	Border
P	Violet*§‖	Violet	6 in.	¶May		6	March	Mass-edging
P B A	Wallflower*	Brown-yellow	12–30	May ¶ May	⅛	6	July-Aug.	Border
A	Zinnia†	Various	12–24	May	⅛	8	July-Oct.	Mass

P Indicates hardy or tender perennials.
B Indicates biennials.
A Indicates annuals.
¶ Indicates time for setting out perennials.
† Indicates flowers especially good for cutting.
* Indicates especially fragrant flowers.
§ Indicates plants for moist places.
‡ Indicates climbers.
° Indicates self-sowing annuals.
‖ Indicates annuals which will thrive with partial shade.

Columbine, an old-time favorite

Nicotiana is an excellent plant for mass effects, flowering profusely. It loves a hot, rich soil

Verbenas, with their lovely bloom and delicate fragrance, should be grown by everyone

Scabiosa, attractive for cutting

California Poppies, yellow to orange in color

SORTS OF PLANTS

Your flower plants will of course be of two sorts, *annuals* (which die, root and branch, at the end of every season and have to be planted anew from seed every year) and *perennials* (hardy shrub-like plants that survive from year to year and which spring up anew from their roots from season to season). Perennials seldom blossom until the second season after planting from seed, and so the annuals are the plants to which the amateur gardener turns when in need of flower effects the first year. If you have not had an opportunity of starting perennials, you may obtain grown plants from your florists, and after these have found themselves at home in your garden they will increase, with care, year after year, until you in turn will be able to exchange with your gardening neighbors. Thus one may have all sorts of beautiful flowers in his first year's garden.

TRANSPLANTING

Some species do not bear transplanting, therefore one should never attempt to transplant seedlings of Candytuft, Love-in-a-mist, Lupine, Mignonette, Nasturtium or Poppy.

WHAT TO PLANT

The accompanying table is designed to guide the beginner at flower gardening to the standard annuals and perennials everyone may grow almost anywhere. It indicates time of sowing, blossoming, etc., which information everyone planting a flower garden will find most useful to have for reference. For all general purposes the plants in this table have been divided into perennials, annuals, and biennials, indicated by the letters P, B, A. Many of the perennials may be treated as annuals, certain annuals as biennials and certain biennials as annuals. Therefore, some of the species in the list are prefixed by two or more letters. As the Chimney Bellflower (*Campanula pyramidalis*), Rocky Mountain Columbine (*Aquilegia cærulea*), and Iceland Poppy (*Papaver nudiculæ*), are so short-lived at best, they may, for all purposes, be treated as biennials.

As the wise among mankind are those to whom far-sightedness is sure to bring its rewards, so, among gardenkind, looking ahead will help one along the pleasant paths of garden making.

Every one should try to picture the garden as it will appear in its wealth of bloom, long after the dull colored earth has donned its garb of green and gorgeous color. If the garden maker will do this he will not wake up to find that he has planted scarlet Gladioli next to delicate pink Cosmos, purple Iris next to blue Campanula, nor mixed the exquisite Love-in-a-mist with blatant Zinnias.

Schizanthus, yellow to lilac

The Delphinium or Larkspur

Sweet Alyssum edging a bed of bright colored Zinnias

Nasturtiums are not to be surpassed for foliage and cutting

Sow seed of cauliflower in May or June and let it follow some early crop

Sow pole beans about May 15 to June 10. These are of the Long Stringless variety

Start early cabbage in the seed-bed now, following with a late variety outdoors

Grow Your Own Vegetables

III. GETTING THE GROUND IN PROPER CONDITION TO RECEIVE THE SEED OR SEEDLINGS —FERTILIZERS AND HOW TO APPLY THEM — GARDEN TOOLS THAT PAY THEIR WAY

BY F. F. ROCKWELL

[*This is the third of a series of articles which will cover in a thorough and practical way the subject of amateur vegetable gardening. The aim is to furnish information covering every detail of what to do and in such a form that it will be clear to the very beginner just how to do it. Each article and its tabular data will give the information needed at the time of its publication, so as not to confuse the home-gardener with an overwhelming quantity of detail; that is, the reader will learn what is to be done at the proper time for doing that particular thing. Those who follow the suggestions made, from the selection of seed to the storing of winter vegetables, may confidently expect a successful garden*—EDITOR.]

THE suggestions already given in the February and March issues, if followed out, will have left the prospective gardener with his garden carefully planned for the most satisfactory results, and a supply of thrifty, stocky, and well hardened-off young plants of cabbage, cauliflower, lettuce, etc., on hand, and his boxes of tomatoes, eggplants, peppers, and other tender vegetables nicely under way.

With these preliminary results of his efforts already visible, and full of promise of good things coming, the beginner will be watching anxiously for the first signs of spring, when the more extensive and absorbing work out-of-doors may be begun. He will have selected a spot in as sunny a place as possible, sloping slightly to the south or east if he can find one, or sheltered to the north or west. He will have looked also for the kind of soil known as "light sandy loam"—the sort that crumbles up nicely in the hand without sticking to it. But he should not be discouraged if, from the necessity of making the garden near his home, he has had to be satisfied with a different soil. If it is rather heavy, cultivation the year previous, or ploughing the fall before, will have helped it greatly. Such a soil will be improved mechanically by the application of stable and barn yard manure, wood, or even coal ashes, or any rotted vegetable matter.

As soon as the frost is out, and the ground can be worked without becoming "sticky," operations should be begun without a moment's delay. Every day missed means some garden opportunity gone—irrevocably. If the garden is a very small one, it may be broken up with a spade or a flat-tined fork, but if there is room enough for a horse to turn around in it, by all means have it ploughed. A plough will lift, turn up, and *break* up the soil as no hand digging can. If the job has to be done by hand, see to it that the soil is dug as deep as possible, and each forkful turned completely upside-down. It should be stirred, whether by plough or spade, down to the sub-soil (the layer of earth underlying, and usually harder than, and of a different color to, the rich top soil). If the land is not naturally well drained, and you can get a man who understands the work, have it "sub-soiled" at the time of ploughing. This breaks up the hard second surface, and provides additional drainage; and thorough drainage is one of the most important requirements of a good garden. When having the ploughing done, be sure to get someone who understands the work, even if at some inconvenience. If you begin operations with a poorly ploughed piece, you will work with a very serious handicap.

Follow the planting instructions given so that you can gather fresh vegetables all summer

Before taking up the preparation of the seed-bed, the question of fertilizers requires attention. If you want the ground to feed you, you must first feed it, and in proportion as you do so are the results likely to prove satisfactory. And with such a small family of vegetables as you will have to feed in the home garden, there is no excuse for stinting. What will they need? Nitrogen, phos-

Do not forget to plant some of these big peppers. Stuffed with chopped meat, they make a fine luncheon dish

phoric acid and potash; but you will have to supply them in one or more of many mixtures. If you can get it, rely principally on old, *well rotted* stable manure, preferably that of horses and cows mixed, and if pigs have run on it, so much the better. With a layer of this three inches thick ploughed into your garden patch, you will be certain to raise a tremendous crop of something—whether tempting vegetables, or a forest of weeds, will depend on your own attention and industry. This manure may bring you some weed seeds with it, but probably the ground contains so many already that it will not make much difference. The weeds are only a *sign* of trouble; they come to remind you that you have been neglecting your job of cultivating. This stable manure — five to eight two-horse loads will not be too much—should be spread evenly over the surface of your ground before ploughing and you should see that your ploughman turns it *all* under, leaving no bunches to clog the harrow, rake, or seed-drill later on.

If good manure is not to be had in your vicinity, you will have to fall back on some of the chemical fertilizers. It will be more convenient to use one of the many ready-mixed brands. As a general rule, the more you pay per bag, the cheaper you are really getting your plant-food. If you can, mix your own fertilizers. Directions for doing this, and for preparing an excellent fertilizer for your garden, will be found in the February issue of this magazine, page xxii. All chemical fertilizers should be applied broadcast after ploughing. Use, for a 50 x 100 foot garden, 200 to 300 lbs., according to quality. Later applications may also be made, as described subsequently. Unleached wood ashes is another excellent fertilizer, both for its plant food and for its action upon the soil, and it can be obtained readily in some localities. Apply fifteen to twenty bushels broadcast on the above space before harrowing.

Nitrate of soda, which forms probably the most important element of mixed fertilizers and plant foods, can with much greater economy be used pure for many purposes. But the beginner will have to be exceptionally careful in applying it. One of its most valuable features is its remarkably quick action. To force plants to early maturity, and to help along backward crops, it has no equal. For application it may be mixed with equal parts of ashes, light soil, or other suitable substance to give it bulk. But personally I have always preferred to use it pure,

PLANTING-TABLE FOR

Vegetable	When to sow or plant[1]	Depth to sow in ins.	Distance		Seed or plants for 50-ft. row	No. days to germinate	No. days to mature
			Apart in rows[3]	Rows apart			
I Crops Remaining Entire Season.							
Asparagus, seed.	April-May	1	2-4 in.	15 in.	1 oz.	20–30	3 years
Asparagus, plants	April	4	1 ft.	3 ft.	50	—	1 year
Bean, pole	May 15-June 10	2	3 ft.	3 ft.	½ pt.	6–10	65–100
Bean, lima	May 20-June 10	2	3 ft.	3 ft.	½ pt.	6–10	60–90
Beet, late	April-August	2	3-4 in.	15 in.	1 oz.	7–15	75–90
Carrot, late	May-July	½–1	2-3 in.	15 in.	½ oz.	10–20	90–120
Corn, late	May 20-July 10	2	3 ft.	4 ft.	½ pt.	4–10	80–100
Cucumber	May 10-July 15	1	4 ft.	4 ft.	½ oz.	4–15	60–85
Egg Plant, seed	June 1st	½	3-6 in.	15 in.	¼ oz.	6–12	125–150
Egg Plant, plants	June 1-20	—	2 ft.	2½ ft.	25		
Leek	April	—	2-4 in.	15 in.	½ oz.	6–20	120–150
Melon, musk	May 15-June 15	1	4 ft.	4 ft.	½ oz.	6–20	90–120
Melon, water	May 15-June 15	1	6-8 ft.	6-8 ft.	½ oz.	6–20	100–125
Onion	April	½–1	2-4 in.	15 in.	½ oz.	15–25	120–175
Okra	May 15-June 15	½–1	2 ft.	3 ft.	½ oz.	10–20	100–125
Parsley[4]	April-May	½	4-6 in.	1 ft.	½ oz.	15–25	90–110
Parsnip	April	½–1	3-5 in.	18 in.	½ oz.	12–18	100–150
Pepper, seed	June 1st	½	3-6 in.	15 in.	½ oz.	6–15	125–150
Pepper, plants	June 1-20	—	2 ft.	2½ ft.	25		
Potatoes, main	April 15-June 20	4–6	13 in.	2½ ft.	½ pk.	15–20	75–100
Pumpkins	May 1-June 20	1–2	6-8 ft.	6-8 ft.	¼ oz.	6–10	100–150
Rhubarb, plants	April	—	2-3 ft.	3 ft.	25		1 year
Salsify	April-May	1	3-6 in.	18 in.	¾ oz.	8–15	125–150
Squash, summer	May 15-July 1	1–2	4 ft.	4 ft.	½ oz.	6–10	60–75
Squash, winter	May 15-June 20	1–2	6-8 ft.	6-8 ft.	½ oz.	6–10	100–125
Tomato seed	June	½	3-4 in.	15 in.	½ oz.	6–12	125–150
Tomato, plants	May 15-July 20	—	3 ft.	3 ft.	20		
II Crops for Succession Plantings.							
Bean, dwarf	May 5-Aug 15	2	2-4 in.	1½-2 ft.	1 pt.	6–10	45–75
Endive[4]	April-August	½	1 ft.	1 ft.	½ oz.	5–10	75–100
Kohlrabi[4]	April-July	½–1	6-12 in.	1½-2½ ft.	½ oz.	6–10	65–85
Lettuce[4]	April-August	½	1 ft.	1-1½ ft.	50	5–15	75–100
Peas, smooth	April 1-Aug. 1	2–3	2-4 in.	3 ft.	1 pt.	5–15	50–65
Peas, wrinkled	April 10-July 15	2–3	2-4 in.	3-4 ft.	1 pt.	5–15	60–75
Radish	April 1-Sept. 1	½	2-3 in.	1 ft.	½ oz.	3–10	25–50
Spinach	April-Sept. 15	1	3-5 in.	18 in.	½ oz.	6–15	60–75
Turnip	April-Sept.	½–1	4-6 in.	15 in.	½ oz.	3–8	60–75

Tomatoes will do well in almost any soil. Support them above the ground if you would have them without blemish

taking care to pulverize all lumps. If the following two rules are observed, it may be used without any danger of "burning" the plants. First, see that none of it ever lodges upon the foliage, and never apply when there is moisture upon the plants. Second, apply in *many* small doses,—10 to 20 lbs. at a time for such a piece as we have been considering. It should be put on so sparingly as to be barely visible; but its presence will soon be denoted by the moist spots, looking like big rain drops, which each particle of it makes in the dry soil.

If you can have ploughed under for your garden a good coating of rotted barnyard manure, followed by a dressing of wood ashes, or fertilizer harrowed in, and can apply 50 to 100 lbs. of nitrate of soda during the summer, your fertilizer question will be settled—and you can pick out a place on your wall right now for some of the blue ribbons to be awarded next fall at your local fair.

In his hurry to get the first plants out and seeds sown, the beginner is likely to hurry over the preparation of the ground. Instead of hastening things a few hours, he is delaying them days. In order to have the best crops, it is necessary that the plants make an unchecked growth from the very beginning, and nothing is more important in giving them the right start than a properly prepared seed-bed. If the ground is in just the right condition

twice over with a harrow may be sufficient; but keep it going until all lumps are broken up, if it takes a dozen goings-over. And it may need to be rolled once or twice during the process! Then it will be ready for the iron rake—and lots of elbow grease. Take a strip about as wide as you expect to plant at once, and rake it from one end. Make it just as smooth as possible, with a backward-and-forward motion of the rake. Rake up just as little sod, stones, and other trash as possible.

When your strip is thoroughly "fined," and as nearly table-smooth as you can make it, the preliminaries are over, and you are at last ready to plant.

OUT-DOOR SOWING

Vegetable	When to sow or plant[1]	Depth to sow in ins.	Distance		Seed or plants for 50-ft. row	No. days to germinate	No. days to mature
			Apart in rows[3]	Rows apart			
III. Crops to be Followed by Others.							
Beet, early	April-June	2	3-4 in.	15 in.	1 oz.	7–15	60–75
Broccoli, early[4]	April	½–1	1½ ft.	2 ft.	35	5–10	100–140
Borecole[4]	April	½–1	2 ft.	2½ ft.	25	5–10	85–120
Brussels Sprouts[4]	April	½–1	1½ ft.	2 ft.	35	5–10	100–140
Cabbage, early[4]	April	½–1	1½ ft.	2 ft.	35	5–10	100–125
Carrot	April	½–1	2-3 in.	15 in.	½ oz.	10–20	60–80
Cauliflower[4]	April	½–1	1½ ft.	2 ft.	35	5–10	100–115
Corn, early	May 10-20	2	3 ft.	3-4 ft.	½ pt.	4–10	60–80
Onion Sets	April-May 15	1–2	2-4 in.	15 in.	2 pt.	—	40–60
Peas	April 1-May 1	2	2-4 in.	3 ft.	1 pt.	5–15	50–65
Crops in Sec. II.							
IV. Crops That May Follow Others.							
Beet, late	July-August	2	3-4 in.	15 in.	1 oz.	7–15	75–90
Borecole	May-June[2]	½–1	2-ft.	2½ ft.	25	5–10	85–120
Broccoli	May-June[2]	½–1	2 ft.	2½ ft.	25	5–10	100–140
Brussels Sprouts	May-June[2]	½–1	1½ ft.	2½ ft.	35	5–10	100–140
Cabbage, late	May-June[2]	½–1	2½ ft.	2½ ft.	25	5–10	120–180
Cauliflower	May-June[2]	½–1	2 ft.	2½ ft.	25	5–10	100–140
Celery, seed	April	½	1-2 in.	1 ft.	1 oz.	12–20	125-150
Celery, plant	July 1-Aug. 1	—	6 in.	3-4 ft.	100		
Peas, late	May 15-Aug. 1	2-3 in.	2-4 in.	4 ft.	1 pt.	5–10	50–75
Crops in Sec. II.							

[1]In the vicinity of New York City. Each 100 miles north or south will make a difference of 5 to 7 days later or earlier.

[2]This is for sowing the seed. It will take three to six weeks before *plants* are ready. Hence the advantage of using the seed-bed. For instance, you can start your late cabbage about June 15th, to follow the first crop of peas, which should be cleared off by the 10th of July.

[3]Distances given are those at which the growing *plants* should stand, after "thinning." The seed, for crops sown in drills, should be sown several times as thick.

[4]Best started in seed-bed, and afterwards transplanted; but may be sown where wanted and afterward thinned to the best plants.

Before taking up special directions for the various vegetables, I want to say a word about seed-drills, and also give a few general rules. No matter how small your garden is, get a combination seed-drill and wheel-hoe, if you can possibly afford it. A seed-drill will enable you not only to get your seeds in more quickly, and with greater ease, but it will do the job *better* than can possibly be done by hand. It will open the furrow, drop the seed evenly, cover with *moist* earth, roll down the drill, and mark out the next row, all with one operation, and nearly as fast as you can walk. And then by changing a few bolts and nuts, you can convert this same machine into a wheel-hoe, that will save you even more work in cultivating than the seed-drill did in planting. You cannot afford *not* to have one. But in case you are just beginning, and do not feel like investing a few dollars this year in one of these machines, keep the following suggestions in mind when planting by hand. Seeds as a rule should not be covered more than three or four times their own depth. They should be planted as soon as possible after the ground is ready, before the surface of the soil has a chance to dry out. They should be "firmed" into the ground, either with the edge of a board, back of a hoe, or by being pressed firmly with the foot, to prevent the formation of air spaces to dry up the newly sprouted rootlets. Great care should be taken to get the rows straight, as cultivation should be begun when the little plants are scarcely up, and it will be much facilitated by even rows.

Get a stout string and stretch it tightly just above the ground for your first row. With a hoe handle mark off along it a shallow drill, deep enough for whatever seeds you may be planting. If a seed-drill is being used, it can be adjusted to plant at different depths, as desired. For peas, beans, and other large seeds, it will be necessary to open up the drill still more, with a hoe. There is an implement with a heart-shaped blade, called the "Warren hoe," made especially for opening and covering drills. Sow the seed evenly in the freshly opened drills, press down as directed above, and cover level with a hoe, or back of a rake. A second firming on top of the row is advisable if the ground is very dry.

Corn takes up a lot of room, but there is all the difference in the world between bought and home-grown corn

So much for those vegetables which are planted in the open from seed. But many crops may be had several weeks earlier by setting out young plants which have been started ahead, as described in the next preceding article of this series. If the following few simple things are done in the important operation of plant-setting, practically every one will live, and they will receive little check in the process. Do this work on a cloudy day, or late in the afternoon if you can. If it must be done on a bright hot day, shade the newly set plants with newspapers. Prepare the ground as for seeds. Mark off the rows lengthwise, and also across, at the proper distances. With a trowel or hoe, dig out at each intersection a hole four or five inches deep. Mix up in an old pail manure (hen manure is the best) and water, until about the consistency of thin paste, and throw half a trowelful into each hole; then mix this up thoroughly with the dirt and cover over level, making a mark with the trowel to indicate just where the prepared spot is. Take your plants, which should be well

(*Continued on page* xix)

Sow your cucumber seed May 10—July 15 for a crop to remain throughout the season

A Long Island Home and Its Garden

THE COUNTRY HOME OF MR. F. D. SHERMAN, OVERLOOKING MANHASSET BAY AT PORT WASHINGTON, —A DISTINCTIVE ADAPTATION OF THE COLONIAL FARMHOUSE—TROWBRIDGE & ACKERMAN, ARCHITECTS

BY JARED STUYVESANT

Photographs by Mr. Sherman and J. D. Walter

A garden of old-fashioned perennials, filled out with annuals, lies just across the main entrance driveway, with a vegetable garden and garage beyond

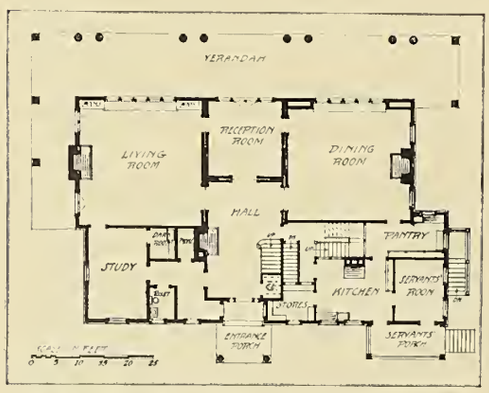
HAVE you ever tried the interesting mental exercise that consists in outlining a mind picture of some person with the aid only of a story or a letter he has written or a picture he has painted? It is astonishing how wide of the mark such conceptions often turn out to be. I am inclined to believe that your mental picture will be far more nearly accurate and true to life if it be based on the character of house a man builds, and the manner of its furnishing and decorating. It matters not how much a man can afford to spend on his home; much or little, there always remains the possibility of stamping upon the result the hallmark of individuality, the fairly accurate expression of one's personality.

But what of the man who hires a decorator and goes abroad to await the completion of the work? Well, there are two possible alternatives: if the decorator is really a master of his art he will succeed in showing forth in the completed house the character, aims and taste of his client; if the decorator is not able—or perhaps not cruel enough—to do this, the result will be the cold, stiff, conventional thing, faultless according to the canons, of course, but like a house without vines. And just as surely, in either case, would you be able to picture the sort of man who would want that sort of thing for his home.

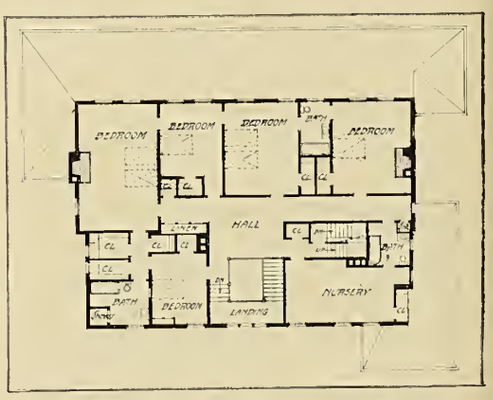
All of which is prompted by the perfectly evident fact that is proclaimed by the accompanying photographs and plans of Mr. F. D. Sherman's home at Port Washington—the fact that here is a house and a garden setting made for a man who knew what he wanted, and got it.

The Sherman house shows a particularly successful adaptation of the American farmhouse type of architecture to modern needs as regards planning and equipment. There is absolutely nothing about either house or garden that is not perfectly in keeping with the modern healthful type of country living—a life lived largely out-of-doors, on the long broad veranda that overlooks the Bay, or on the garden side among the old-fashioned flowers.

The suburbs of our large cities contain quantities of another type of country home—large estates, laid out stiffly with severely formal gardens, cold marble seats, elaborately carved fountains—the so-called show places of America. The houses are almost castles, with great oak-paneled libraries, in which nobody ever reads, with morning rooms, breakfast rooms, interior fountain courts—all usually large, inhospitable and deserted. Contrasted with places of this sort, the Sherman place is a real *home* for the American business man who wants a place to live in, not a transported Italian villa nor a feeble imitation of an English manor house for his neighbors to look upon. Based, architecturally, on the type that belongs solely to Long Island—the quaint low farmhouses of the early settlers, which still lend a distinct flavor to localities like Easthampton, for example, it is designed with no slavish repetition of plans outgrown, no handicap of antiquated methods, but with the idea of making a modern, comfortable, sanitary, country home.



Large rooms, grouped conveniently around a spacious hall, make a splendid first story



Three bathrooms, one containing a shower, are conveniently related to the five bedrooms

A foliage-green landscape paper, in combination with the white woodwork, gives the dining-room a brilliancy approximating outdoors

A gold wall paper, with brown as the dominant color in furniture coverings and hangings, makes bright the twenty-five-feet-square living-room. French windows, flanking the fireplace, open upon the large veranda

The entrance driveway approaches the side of the house opposite that facing Manhasset Bay, and separates the house from the garden; the latter was not fairly started when the picture was made

Look at the first floor plan, for instance. Everything is on a generous scale but without ostentation or undue formality. The living-room and dining-room are each approximately twenty-five feet square, separated by a reception room, fifteen feet square, that is entered from the central hall, fifteen by twenty-four feet in size.

To my mind the arrangement of the owner's study and its adjoining photographic darkroom, toilet and telephone closet, is one of the most interesting features of the plan. This dark-room, by the way, is royally equipped with running water, enameled sink and glass shelves.

Opening from the living-room on the fireplace side are French windows that lead out upon the great veranda along the Bay side. With a total length of eighty-seven feet and a width of thirteen, it can readily be surmised that here is the real living-room throughout the summer months, with the enclosed living-room proper merely a withdrawing room for the late evening.

On the second floor, the abundance of bathrooms at once marks the long step forward we have taken in that particular direction over the old farmhouse prototype, wherein such luxurious necessities were not so regarded. It will be seen from the floor plan that only one of the six rooms is not immediately adjoining a bathroom, and in the owner's suite as in the study below, man's individual rights have been asserted and have found expression in a built-in, tiled shower-bath.

Throughout the second story, as in the first, the scheme of furniture and decoration is Colonial. Rag rugs are used on the bedroom floors, as in the dining-room, with cretonne and other brightly colored fabrics for the hangings and furniture coverings.

Storage space and the servants' bedrooms are found on the third floor, reached, as the second-floor plan shows, through an isolated back stairway.

Fifteen by twenty-five feet makes a hall big enough to serve as another living-room

Along the full length of the house towards the Bay runs the thirteen-feet-wide veranda, eighty-seven feet long—the center of things throughout the whole summer season

In the garden the plan is very simply geometrical, to give easy access around the beds and border of old-fashioned perennial flowers, filled in here and there with annuals. A row of tall Hollyhocks and Golden Glow surrounds three sides of the flower garden, leaving the lower end open to the vegetable garden adjoining. In this latter, which includes about 150 x 200 feet, an abundant store of all the vegetables is grown under a gardener's care.

At the end of the vegetable garden stands the garage, with comfortable quarters for the gardener and his family above the motor space.

In landscape work, whether it be grouping shrubs around the base of a house or planting them in masses about the outside edges of lawns, the individual specimen must give way to the effect as a whole

Planting Shrubs for Mass Effects

THE LANDSCAPIST'S POINT OF VIEW IN THE MATTER OF SETTING OUT SHRUBBERY BORDERS—THE NECESSITY FOR DETERMINING THE PLAN AND SKY LINE ACCURATELY ON PAPER

BY GRACE TABOR

Photographs by Nathan R. Graves and others

[*The seventh of a series of articles on the subject of landscape gardening as applied to the American home of moderate size, preceding titles being "Utilizing Natural Features," "Getting Into a Place," "Formal or Informal Gardens," "Screening, Revealing and Emphasizing Objects or Views," "Boundary Lines and Boundary Plantings," and "Planting Trees for Air, Light and Shade." Questions relating to planting details will be gladly answered.*—EDITOR.]

THERE seems ever to have been an antagonism between the horticulturist's view of a plant and the landscape architect's. To the former it exists as a specimen, an individual that is filling an important place in the world in and by itself; the spread of its branches and the size and quantity of its blossoms are the things by which he judges it and by which he values it—consequently the more these are increased, the more any characteristic is exaggerated in it, the more valuable to him does it become. Naturally, therefore, his whole aim is to provide it with those surroundings which will promote such exaggeration to the highest degree.

But the landscape architect views it from a very different point. A plant is to him what a single note is to the musical composer, or what the tubes of raw, pure color are to the painter. One note, struck by itself, can mean nothing, no matter how loud and startling or soft and sweet the tone; one color in a great vivid blotch on the canvas expresses nothing, no matter how clear and striking it may be. It is only as the note is brought into relation with other notes, the color with other shades and colors, that a composition takes shape.

It seems, sometimes, as if the time would never come when this truth about plants would be realized by everybody. Year after year sees the same mistakes made, even on the larger estates where large sums have been paid for the services of professionals presumably skilled and cunning in the craft. With all the money spent the well planned and well planted place remains the exception, so rare as to be startling when one comes upon it, while examples of wrong ways, wrong from their fundamental ideas up, are everywhere. Almost every village and suburban street presents a solid front of garden misconceptions disheartening to see.

The two views just cited are of course antagonistic and one can readily see how utterly impossible it is to ever make them anything else, so one need spend little time in attempting to harmonize them. Instead let us see what reasons there are for adopting one and rejecting the other.

First of all it is necessary to realize that there are certain special things, grown for show, and for competitive *shows*, which have no more to do with gardening, considered as a fine art, than chalk has to do with oil painting. The biggest Dahlia in the world, winner of all the prizes, would add little or nothing to a garden's beauty if it stood outdoors, among the growing things; the carefully trained and framed Chrysanthemum plant, bearing a thousand blossoms, might as well be a Coreopsis bush for all the effect it would create in relation to other plants in the border—and the rose bush, coddled and pruned and petted till it produces a single four-foot-stemmed American Beauty, becomes a sorry spectacle, once its solitary flower is plucked.

These may be exaggerated examples to be sure, but they illustrate the point we need to impress upon our minds—that individualism is *not* the garden's ideal. And though they are exaggerated, they are after all only the result of going a few steps farther along the path of individual culture than the usual practice which aims to plant shrubs in isolation "so they can develop."

Any view that persistently puts the *development* of a shrub before other considerations governing its location, is a mistaken one; and until, once and for all, we get over cherishing such views we will continue to go wrong in design, and to fail in attaining our proper effects.

Abandon completely and absolutely the mental picture that dissociates "shrub" from "shrubbery," and create in its place one which unites the two so closely that you will come to feel them one object and synonymous terms. Then live up to this creation determinedly, and let no remarks of misguided neighbors—however well meaning they may be—about things choking

to death and having no chance to grow, shake your resolution nor divert you from your course. They may think you crazy—that is to be expected, but you will know that you are not, and that time, and your grounds, even if they are only 50 x 100 ft., will be your vindication.

It is very simple if one wishes to reason it out, since any plant set in an open space and encouraged to "develop" is but a few steps short of the plant trained with the avowed purpose of producing phenomenal flowers or fruits, and phenomenal flowers or fruits are of absolutely no merit as garden ornaments and the plant trained to produce them usually suffers in the process. Hence it follows that a plant—or, to speak more definitely, a shrub—set singly as a specimen in a garden or for the adornment of grounds, is an anomaly.

Grounds are not ornamented by shrubs of this kind, for it is the shrub itself which holds attention under these circumstances. Wonder and perhaps a certain crude admiration are excited by it—but the idea of grounds or a garden is lost sight of completely. There is no impression of charm and beauty resting upon all, of a dwelling rising from a suitable setting, of an outdoors that appeals and satisfies, of a picture that is complete. These things are sacrificed to a monstrous something calculated to draw an astonished "oh!" from the beholder.

With the resolution to always mass "shrubs" until they form "shrubbery" and to always plant them so near together that they will interfere and encroach upon each other outrageously, firmly and immovably fixed so that nothing can shake it, let us examine first the points that come up in laying out the ground plan of such border or mass. The ground plan itself takes precedence over all other work, consequently it is upon that that the gardener must start, indoors instead of out.

Regularity, so far as that implies planting in rows or squares, is of course to be avoided in an informal shrubbery border. But haphazard, grotesque zig-zagging is not the way to avoid it, neither is what nurserymen call "staggering." A carefully worked out plan is the only way, with an equally careful transfer of it from the paper to the ground.

Such a plan is made by first drawing in lightly the general large curves representing the inner line of the shrubbery—it being assumed of course that the plot to be planted is laid off to scale on the drawing paper. Then, starting at either end, the first shrub is located where its spread of branches can be calculated to come on this curve; follow all along this inner line first, leaving a space of from two and one-half to four feet between the shrubs, depending on their size.

Next, proceed to fill in back of this—in some places a dozen plants may be required within a very small distance along the boundary while in others only one or two will be needed to build up the border.

The species and variety of practically every one should be determined as the shrub is set down upon the plan, otherwise difficulties will arise over the distances between them. In a very large planting this is not always essential as there will be certain locations calling for many of one kind. But even here it is well to have a general idea of what each lesser group composing the large group is to be, as they are set down. It takes time—but it is the thorough way.

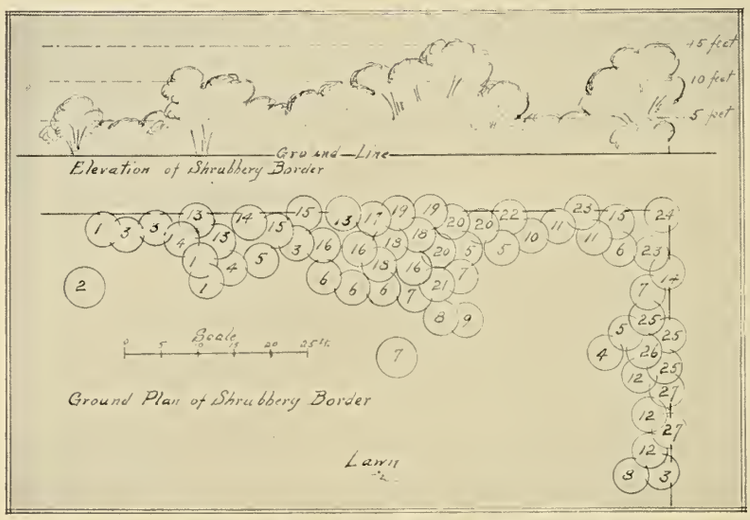
In field work a plan is divided into squares of convenient size and every shrub in a given square is located by a stake driven into the ground and labeled to correspond with the label on the shrub, before any planting in that particular square is really done.

Reference has been made in a previous article to sky line. It is as much to be considered in planting shrubs as trees, for although the top of shrubbery may not cut the sky when viewed under ordinary circumstances, the outline of its top, taken as a whole, has an important place in a composition.

To give this sufficient variation there must be intervals of comparatively low-growing varieties that are not backed up by larger specimens; and these intervals, constituting the variation in the "profile" or vertical section of the border, must be as carefully thought out and planned as the ground plan of the group. Generally speaking they will take the ground plan for their guide and rise from it quite as the elevation of a building rises from its plan; but here, as in architecture, the designer must have the instinct which adopts the right form and rejects the others.

The diagram appended shows the principle, and the manner in which the plan serves as a guide to the profile. Notice that wherever the border deepens on the ground, it rises higher in the elevation; by determining the ground plan first, therefore the elevation will rise from it almost automatically and with no trouble to the designer and no confusion. And a glance at the elevation shows exactly where the tallest and the lowest shrubs must stand and the intermediate ones as well. Make your plan therefore first, in rough sketch form, then develop the elevation or profile

(*Continued on page* xxii)



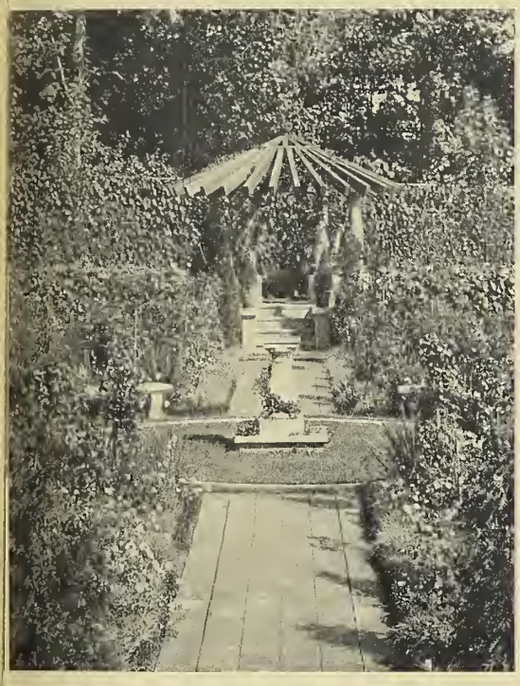
This "elevation" of the border shows it, particularly the upper outline of it, as it would appear to a person standing on the lawn and looking against it. Wherever the mass broadens on the ground, the sky line rises higher—wherever it narrows on the ground the sky line descends. Dotted lines across the elevation are at the 5, 10 and 15 foot elevations respectively.

Number and Name	Bloom	Height	Color of Flower
1 Callicarpa purpurea	August	4 feet	Pink
2 Amygdalus communis, alba flore pleno	May	6 feet	White
3 Clethra alnifolia	July-Sept.	8 to 10 feet	White
4 Deutzia gracilis	May-June	4 feet	White
5 Deutzia gracilis, rosea	May-June	4 feet	Pink
6 Azalea mollis	April-May	3 to 8 feet	Red-yellow-white
7 Hydrangea quercifolia	June	6 feet	Pinkish white
8 Hypericum Moserianum	July-Sept.	2 feet	Golden yellow
9 Lonicera Alberti	June	3 feet	Rose pink
10 Andromeda Mariana	April-May	3 feet	White
11 Caryopteris mastacanthus	Aug.-Oct.	5 feet	Violet blue
12 Eleagnus longipes	April-May	6 feet	Yellowish white
13 Cornus sericea	June	10 feet	White
14 Lonicera Tatarica	May-June	10 feet	White or pink
15 Spiræa arguta	May	7 feet	White
16 Azalea viscosa	June-July	8 feet	White, tinged red
17 Baccharis halimifolia	Sept.	12 feet	White seed vessels
18 Cornus alba	May-June	8 feet	White
19 Rhamnus Frangula	May	12 feet	Inconspicuous
20 Tamarix Gallica, indica	July-Aug.	15 feet	Pink
21 Lonicera fragrantissima	March-April	6 feet	Creamy white
22 Calycanthus floridus	June	8 feet	Brown
23 Crataegus Oxyacantha	May	12 to 15 ft.	White
24 Viburnum Lantana	May	20 feet	White
25 Syringa vulgaris	May-June	20 feet	White and lilac
26 Syringa villosa	May-June	8 feet	Pinkish lilac
27 Forsythia Fortunei	April	8 feet	Yellow

If you have a sun-dial in your garden see that its base is accessible from the paths

Steps and flanking pedestals for formal plants may easily be made from cement

Even in the informal garden a marble is an effective foil for the shrubbery



When the circular shelter is more luxuriantly covered with vines it will make an ideal resting spot

An old Japanese lantern of wrought iron in Mr. Thomas W. Lawson's garden

A basin of marble or cement, in which the water is renewed by hand, attracts the birds

Useful as well as ornamental is this graceful seat in brilliant contrast with its green background

Reproductions in cement of old Italian fragments are not expensive

Do not use a Japanese stone lantern unless you can give it a setting of curious rocks and dwarf trees

A PAGE OF GARDEN ORNAMENTS

Although the paneled wainscoting and much of the furniture is of the Elizabethan period there is no apparent incongruity in the introduction of the upholstered easy-chairs

Congenial and Uncongenial Furniture

THE NECESSITY FOR SELECTING FURNITURE THAT WILL HARMONIZE WITH THE ARCHITECTURAL STYLE OF AN INTERIOR — HOW FAR ONE MAY GO IN GIVING PLACE TO ODD PIECES

BY MARGARET GREENLEAF

Photographs by Floyd E. Baker and others

IN selecting the furniture for the new house the ambitious amateur must take first into account the architectural demands made by the type of the house to be fitted, and second the requirements of those whose lives will be lived within its walls. This done, there is little likelihood of failure in the completed rooms, as the finished result must of necessity be consistent and suitable and therefore beautiful.

There are, however, several varieties of pitfalls awaiting the inexperienced and unwary. One may fortify one's self, however, by thoughtful observation and intelligent reading upon the subject-matter of ornament and furniture of the several periods most frequently encountered in the architectural designs and types of furniture in use today, and thus have ability to distinguish and select that best suited to the house under consideration.

The present extensive employment of cement and concrete in the construction of houses has brought forward the "Craftsman" type of house, as well as the half-timbered English, as both styles lend themselves well to this material. The furniture used in the Craftsman house must carry the same plainness of line and sturdiness of construction as the building itself expresses. That variously known as Mission or Craftsman can be used throughout, and will seem at once a part of the rooms in which it is placed, although in houses of some other designs (notably Colonial) this furniture is wholly incongruous and difficult to place. As much of this furniture is very heavy, it is a good idea to supplement such large pieces as the davenport, long table, and easy-chairs, with some chairs of wicker or willow. These may be of

No type of furniture would harmonize so well with the architectural character of this dining-room as the so-called Craftsman type

The rather unusual combination of mahogany furniture built on Mission lines is found in this spacious living-room

A sample of the over-decorated gaudy "parlor" of a decade ago, including the ubiquitous "what-not," which, fortunately, we have left far behind

foreign make, either the East India or the Hong Kong. Both of these styles show in form and color the clever workmanship and artistic ability of the Oriental craftsman.

Houses modeled somewhat after the bungalow, and other small houses in which the elimination of all ornament is the keynote of the interior detail, will also be found to hold such furniture agreeably. This furniture is usually made from oak or ash, darkly stained and finished with a soft polish. Occasionally, however, mahogany is used, though not so successfully, as this wood is too closely associated in our minds with the more elegant lines of Colonial furniture.

For the Colonial or semi-Colonial house, reproductions of the numerous furniture designs of that period find appropriate setting. However, to make a successful Colonial room one need not necessarily be a purist. The charge of stiff formality is sometimes brought against the careful Colonial treatment of rooms. This is by no means necessarily attendant upon correct Colonial decoration. While there can, of course, be no over-crowding of such rooms, we should bear in mind that no style of furnishing should be considered which does permit of this.

In furnishing the Colonial house we are by no means restricted to the designs of Chippendale, Sheraton, Hepplewhite and others of their kind, but with perfect propriety pieces ante-dating the time of the Georges may be introduced, as the Colonial is the direct outcome of the Georgian and previous periods.

Colonial furnishing is sometimes accused of being too austere for comfort, but this consistent living-room disproves it

There is a distinct difference in the type of furniture which was used in the Colonial mansions of the South, and that of the New England houses of the same period. In the former one feels the French influence in the ornamentation and carvings of the rosewood frames of the more formal designs, while the New England type is austere and affected by the Puritan spirit of the time. Thus furnishing and decorating a house of Colonial suggestion can become a very real pleasure to the owner, as in fitting it with suitable and congenial pieces of old furniture or some of the many excellent reproductions of good design which are to be had to-day, a beautiful and livable scheme may be worked out. After the wall decorations and hangings are in place the furniture should be added slowly and carefully, each new piece being thoroughly tried out before its final disposition is determined.

There are many helpful books on Colonial furniture to be found in our libraries which should be read and digested by any one who purposes undertaking the fitting up of such a home.

We have given special prominence to the consideration of Colonial furniture as in the treatment of houses of this beautiful and dignified style the amateur may readily meet with success. This is largely owing to the careful reproductions which are made of the furniture best suited to such interiors, and also the excellent examples of these houses which are now extant and which, through actual acquaintance, or pulished illustrations, are well known to the public.

So many and such unspeakable mistakes are committed in the name of "French Period Decoration" that even the least experienced have come to fear it. It must be recognized that this treatment has no place in the home of modest pretensions. A house to be so decorated must be designed along lines characteristic of the period, the architectural detail of the interior making ready the way for the silk-paneled walls, framed in stucco garlands and overlaid with floating ribbons, swags of fruit and flowers, and the ornate cornice and chimney piece which will supply a proper setting for the carved gold leaf, tapestried furniture, and delicate brocades of that time.

In the recent past, American manufacturers have flooded the markets with so-called Vernis-Martin cabinets and tables, as well as frankly gilded and machine-made chairs and couches labeled Louis XIV, XV, or XVI period, as the fancy of the dealer or the customer has dictated. It is furniture of this and kindred types which makes for the very bad decorative effects shown in many of the more elaborate of our homes! Fortunately, however, this condition is also passing and the building public is individually

(*Continued on page* xix)

Practical Talks with Home-builders

BUILDING A HOME UNDER A SINGLE CONTRACT OR UNDER A DOZEN OF THEM—THE ADVANTAGES OF EACH METHOD AND THE COMPARATIVE COSTS

BY ALEXANDER BUEL TROWBRIDGE

[This is the sixth of a series of intimate helpful talks with those who are about to build. The aim is to offer untechnical suggestions to prospective home-makers in the hope that many of the common mistakes and difficulties may be avoided through foreknowledge. The talks are written for those of moderate means rather than for those to whom economy is no object.—EDITOR.]

CONTRACTS are usually written by the architect, who follows well known customs regarding payments, etc., unless requested by builder and owner to substitute special agreements. The wording of an ordinary building contract was determined several years ago at a convention of builders and architects and is now issued in printed form with blank portions reserved for filling in with names, amounts, dates, etc. This form, called "Uniform Contract," may be purchased at any well supplied stationer's carrying architectural materials. As in the case of specifications, it is not necessary for the owner to read the contract with the intention of criticising its phraseology, but rather to acquaint himself with the obligations he assumes.

Contracts for a house may be let in two or three different ways. A contract may be signed with a carpenter who agrees to complete the entire work; that is he stands responsible for the installation of heating, plumbing and lighting as well as for those branches more nearly allied to his own trade, such as masonry, plastering and painting. The advantage in this method is secured through placing the responsibility for everything in the hands of one man or firm, thus reducing the possibility of complications which might arise if each tradesman worked independently. The disadvantage becomes apparent when it develops that the general contractor is carrying on his business with little or no capital. He is then apt to make his sub-contractors wait for their pay while he applies what he receives to settle the debts of some previous building operation. In this way liens are filed against the work and the owner finds himself in an embarrassing position.

Again, a separate contract may be signed with each tradesman. This has a decided advantage, as the owner saves whatever profit a general contractor would receive if the first mode of procedure were followed. That is, the owner lets contracts on a competitive basis with mason, carpenter, plasterer, painter, steam fitter, plumber and electrician. In large operations the number of sub-contractors will be three times as many as those mentioned. It must be noted, however, that this mode of procedure requires "canny" specifications. The architect is obliged to describe in words that will not admit of two meanings the duties of each contractor, so as effectually to prevent any tradesman from evading his obligations by shifting to another what is really his own work to perform. The separate contracts must receive the same kind of care in writing. Whatever points are not covered by the specifications must be cared for in the contracts.

This method of building requires the services of a "clerk of the works"—a man who spends his entire time on the job. He not only acts as a superintendent in assisting the contractors to interpret the drawings, but he keeps the architect in daily touch with the progress of the work and gives preliminary notice to the contractors as to the dates for commencing work and when to ship their materials. A clerk of the works is employed by the architects at the expense of the owner. Good men may be secured at salaries varying from $25 to $50 per week. For complicated operations involving the supervision of many trades and many men, a high-priced man is a necessity. Whether the work is done under a general contractor or through many sub-contractors, a clerk of the works is an assistant of value. The architect's ordinary fee, covering superintendence, does not include constant supervision. It generally is interpreted to mean visiting the work several times a week in order to explain drawings, pass upon the appearance of completed work, etc. He does not agree to stand over the concrete workers, for instance, and watch with minute care the proportions of cement, sand and stones that are being mixed together. A clerk of the works, however, is able to give this kind of careful scrutiny and is often the means of securing dependable, honest construction.

A third mode of procedure is a compromise between the two foregoing. An owner may let the masonry, carpentry, plastering and painting in one contract and let heating, plumbing and wiring or gas piping separately. The chief advantage in this is the saving of the general contractor's profits on such contracts.

It is customary to insert in a contract a date for the completion of the work. As this clause is hedged about by counter agreements relieving the contractor from personal obligation in case of strikes or other unforeseen calamities, it is almost impossible to enforce the usual "time clause." If, however, a separate clause is written calling for a forfeit for each day of delay after the proposed date of completion and a bonus for each day gained through rapid work, the courts have a definite agreement upon which to argue and a decision may be reached.

In the question of city contractors versus country contractors, the writer's experience leads him to state that if the owner is not in a hurry and is not expecting the highest grade of finish in the work, he can profitably engage a country builder. Their prices are generally much lower than those of city builders and their work is good enough for all ordinary house construction. If speed is important, the country builder must be eliminated. One reason why they are compelled to work slowly is because the mills favor the bigger contractors in turning out mill-work, and the country carpenters are obliged to wait the pleasure of the millmen.

The saving through using a country builder is large enough sometimes to warrant the custom. For example, a house which came to $12,000 in city estimates was built for $9000 through five different contracts with country contractors. It would have been possible to employ a clerk of the works for even this small job at a salary of, say, $30 per week; to have used up twelve months in building the house, and to have been a gainer by approximately $1500. In this small operation the architect increased his fee as follows: The regular fee for the work was 7½ per cent of the cost. By dividing the work into five contracts the architect increased his own office work and his supervision, but he saved the owner, it was estimated, at least 10 per cent on the amounts paid to the heating contractor, the plumber, the painter and the electrician. The architect therefore added to his regular fee an amount equal to one-half of this saving, an arrangement which is well worth the careful consideration of every owner. It can be just as profitably undertaken with city contractors. In fact, as general contractors often obtain more than 10 per cent on the sub-contracts, the saving would be proportionately greater.

An interesting corner porch, with an upper balcony and a Germantown hood. George Spencer Morris, architect

The old-time southern Colonial porch, extending through two stories, is an expensive type, but unsurpassed for stateliness

It is becoming increasingly common to have either an uncovered terrace or one that is shaded by a pergola

If one can swing out a generous octagonal or circular corner, comfort is gained with less darkening of the first-story rooms

Mr. Chauncey Olcott's home at Saratoga Springs shows the modified Dutch Colonial type, where the long sweep of the roof comes down to cover the porch. Keen & Mead, architects

The small stone entrance porch marks the center of a long open terrace. Andrews, Jacques & Rantoul, architects.

One too infrequently sees second-story porches such as this one. Myron Hunt & Elmer Grey, architects

Many of the old Colonial homesteads had comparatively small entrance porches, usually showing a wonderful delicacy of woodwork

On this quaint Dutch Colonial house may be seen the prototype of such porches as Mr. Olcott's above

A PAGE OF PORCH SUGGESTIONS

Small Fruits for Every Garden

HOW ONE MAY HAVE FRUIT IN THE GARDEN FROM MAY UNTIL OCTOBER—WHAT VARIETIES TO PLANT AND HOW TO PLANT AND CULTIVATE THEM

BY S. L. DE FABRY

Photographs by the author and Nathan R. Graves

Strawberries from one's own garden make mouths water as no other fruit will. Climax, Fairfield and Virginia are among the best early varieties

THERE ought to be no country home, no suburban residence without a small space allotted to grow berries and other fruit. By planning judiciously, fruit of all kinds, sufficient for a family of six or eight, can be grown in a space of the size of an average back yard and enjoyed, freshly gathered from your own garden from spring until autumn. The work requires less care than vegetable growing, and when the plants are once started the culture is simple and the harvest fascinating.

Select your plot, possibly the rear of the lot, near the fence, adjoining the vegetable garden, or any suitable ground you can spare. The end of March or beginning of April is the ideal time to plant the fruit garden. Broadcast the ground with well rotted manure, so that every part of it is covered with a three to four-inch layer. Spread evenly over this ten pounds of muriate of potash and twenty-five pounds of ground bone (procurable at any seed store) to every square of twenty-five feet. Now spade the ground by hand deeply, turning the manure and fertilizer under. When this is done, rake the soil fine with a steel rake, so it pulverizes well, then the ground is prepared to receive the berry plants or trees, no matter how poor the soil was. Before setting out, soak the roots of plants or trees for an hour in a vessel containing liquid poultry manure. A small shovelful of droppings to a pail full of water, well stirred, will do the trick. Earlier sprouting will reward you.

Raspberries and blackberries are climbers and delight in upright growth. Plant about six plants each, three feet from the fence, allowing four feet between the plants in the row. Use yearlings. Dig a hole of sufficient size, mix bottom well with rotted manure, place roots evenly distributed in the hole, cover with fine soil and press firmly around plant, then water liberally. One of the best varieties of red raspberries is the King. In blackberries, Rathbun ranks as having the largest berry and is the best yielder. In order to get large fine berries, they must have sun. Avoid the old idea of bush formation, which will shade all except toppers. Let two or three shoots on each side of the plant grow, tie the growing shoots to the fence, adding small posts to the latter, and cross-wire their tops at a height of six feet. Pull up all other shoots, letting the strength of sap concentrate in the selected canes. After they have fruited, cut them off and repeat with new shoots. This is called by some the "new" culture, though it has been practiced by the writer for a decade.

Three feet away, but parallel with the above fruits, plant early strawberries. They will ripen first, and will be out of the way before the raspberries and blackberries are gathered. Plant strawberries in rows, fifteen inches apart each way, so that all three will be within a strip forty-five inches in width. This is termed a matted bed, and gives a large yield in a small space. A row fifty feet long will require 150 plants, fully enough for family use. In planting strawberries take a garden line and mark out the rows. Then with a pointed stick make holes one inch wide and about three inches deep, fill these up with water, and place a root in each hole; then press firmly around the plant, in order to let the air out, being careful not to bury the heart. Strawberries set out this way will live. Water the young plants for a week in the late afternoon. Never let the ground get dry or hard. Hoe often to keep weeds out and the soil loose. Strawberries like shade and water. Among the good early varieties recommended are Climax, Fairfield and Virginia.

In order to supply some shade, plant gooseberries and currants next to the strawberries, about four feet away from the outside row of matted bed. Here use two-year-old plants and set them out four feet apart in the row. The mode of planting them is similar to that for raspberries. About four currant bushes, and as many gooseberries, will fully supply the family table demand. If you like red currants use Fay's Prolific. In white varieties, White Grape is one of the best; while Houghton is one of the best table gooseberries as well as one of the best varieties for preserving—a factor that must not be left out of consideration.

Gooseberries like these may be grown in every garden

The after-culture for currants and gooseberries consists in cutting out the dead canes every spring. Some wood ashes worked in around the bushes with a hoe is beneficial. Keep the soil loose, hilled up a trifle and free from weeds. Prune the plants to three feet in height. It is well to watch for the currant worm. A white caterpillar, which often appears very suddenly after the fruit has set, greedily devours the foliage and ruins the fruit. Care must be taken to pick off and destroy these intruders.

Most berry bushes will bear crops the second summer after planting. Strawberry beds should be renewed every two years. You can obtain new roots for this from your own bed by setting out the young layer plants called "suckers," which are thrown out by the old plants.

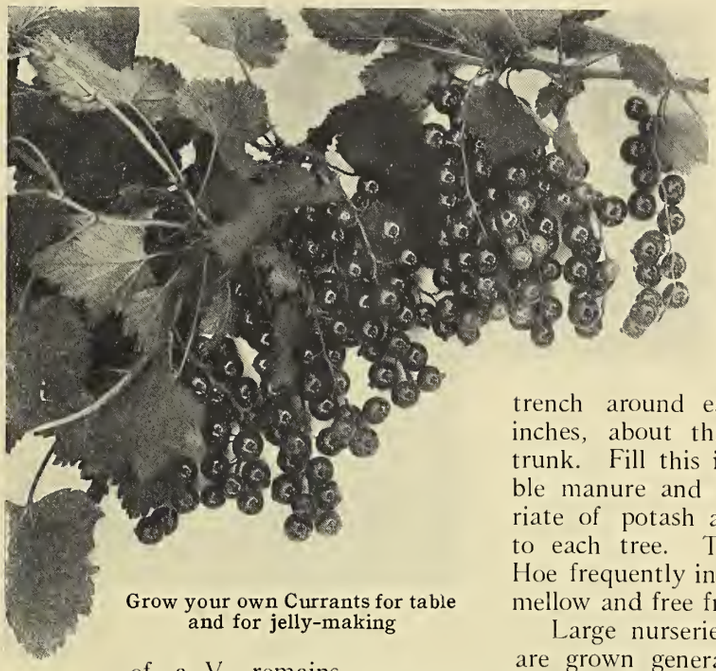
Raspberries, blackberries, currants and gooseberries, once planted and properly taken care of, should last for ten years or more.

Besides a variety of berries, a few fruit trees will be needed in the garden to make the selection greater and the period of fruit gathering longer. The tall varieties or standard sorts require so much room that dwarf trees must take their place in the small garden. The merit of these is appreciated to the full where an orchard is not possible. Apples, pears and cherries can be grown, to full perfection, by using the minimum of space required by dwarf trees. These trees should have been grafted on quince stock and, if properly pruned, should not exceed six to seven feet in height, often less. They come into bearing sooner than the Standard trees. What they lack in quantity they make up for in quality and in the size of their fruit. They can be planted at a distance of from six to eight feet apart, and, for the first two years of their growth vegetables or flowers can be grown between the rows. Trees from two to three years old are used for setting out. Before planting them, clip the top branches off, so that only the largest, forming a fork in shape of a V, remains. The roots must remain heavier than the tops. The planting process is a simple one. Dig a hole of sufficient size, in the bottom of which place some well rotted manure.

The tree (the roots having been treated previously with liquid manure) should next be set in the hole which has then to be half filled up with fine, good soil, firmly trampled down under foot by the planter while his assistant holds the tree vertical. Then water freely, after which fill up the remaining space to the ground level, treading soil solidly around trunk of tree. Two or three trees of each variety will be all that is needed at the most for the family table.

The after-culture of dwarf fruit trees consists in fertilizing and pruning the trees. The first two years very little pruning is needed on dwarf trees. Bear in mind that the formation wanted is a vase form of from five to six feet high, in proportionate width. Later, in pruning, cut off the straight shoots overlaying or growing inside branches; this should be done in winter when the tree is in a dormant state.

Caring for the half-grown fruit of the dwarf Pear, Duchess d'Angouleme



Grow your own Currants for table and for jelly-making

Every spring the soil around the trees must be enriched. A proper way to fertilize dwarf fruit trees is to dig a circular trench around each tree to a depth of fifteen inches, about three or four feet away from the trunk. Fill this in with a few shovels of good stable manure and a mixture of one pound of muriate of potash and two pounds of ground bone to each tree. Then fill up to the ground level. Hoe frequently in order to keep the soil loose and mellow and free from weeds.

Large nurseries where fruit trees of fine quality are grown generally have on hand an assortment of dwarf trees. As to varieties, the following are especially recommended by the writer as a good list to select from:

Summer Apples: Red Astrakan, Early Strawberry, and Yellow Transparent.

Autumn Apples: Duchess of Oldenburg, Golden Pippin, and Rolfe.

Winter Apples: Ben Davis, Newton Pippin, and Wine Sap.

Summer Pears: Clapp's Favorite.

Fall Pears: Duchess d'Angouleme.

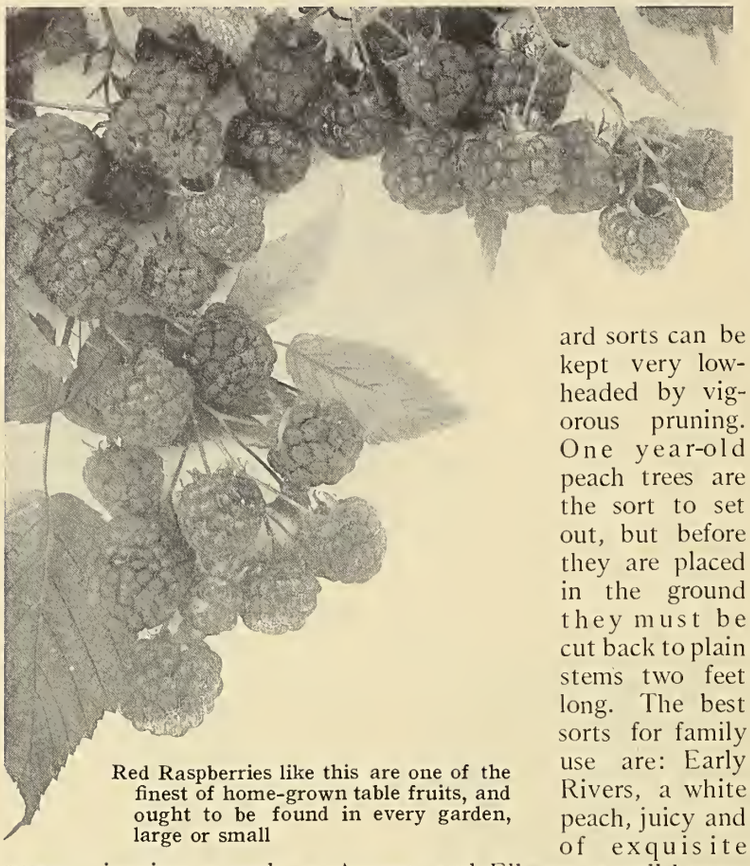
The writer has grown the Duchess d'Angouleme pear on dwarf trees to the size of a small cantaloupe; it combines exquisite flavor with long keeping qualities.

Cherries: Yellow Spanish and Napoleon Bigarreau can be recommended if you like sweet yellow ones. For dark acid sorts Early Richmond and Baldwin ought to find a place in your garden.

Plums: Some of the Japanese varieties grow compact enough and, if pruned back, will take very little room. Of the Standard sorts Abundance will be found the best. It is a very early and prolific bearer of fine flavored plums, and the growth of the tree commends it to a small garden.

Peaches: These are not grown on dwarf trees, as the stand-

When winter finds your fruit trees like this paint trunks and larger branches with whale soap solution



Red Raspberries like this are one of the finest of home-grown table fruits, and ought to be found in every garden, large or small

ard sorts can be kept very low-headed by vigorous pruning. One year-old peach trees are the sort to set out, but before they are placed in the ground they must be cut back to plain stems two feet long. The best sorts for family use are: Early Rivers, a white peach, juicy and of exquisite aroma, ripening as early as August, and Elberta, a well known yellow sort, good for the table as well as for preserving.

Plums and peaches should be set out two to three feet farther apart than the dwarf trees. The pruning of peaches is different from the other sorts. Before they bear, prune tops low, about half the wood of last year's growth, but cease this the season they start to fruit, as bear in mind that *the fruit of peaches comes on last year's growth of wood*. After they reach bearing age, cut out suckers, crowded branches and all the old wood already fruited the tree can stand. This will drive the sap in young wood, and a good crop is assured every year.

The quince, though not a popular fruit, is one that must not be overlooked. It requires a deep rich soil, and the trees should be well mulched with thoroughly rotted stable manure. Plant quince trees not less than ten feet apart. The Champion variety bears a fine quality of tender fruit and bears very young.

Berry bushes, as well as fruit trees, are subject to diseases, which have to be combated. "Leaf Blight," "Rust" and, on peaches and plums, "Brown Rot" are the most common fungus diseases which, fortunately, are recognized. Bordeaux mixture is the great all-around fungicide, and may easily be applied with a small hand spray-pump in the home garden. For use in small quantities it is as well to buy Bordeaux mixture of the standard formula in concentrated form from some seed store. It comes thus in cans holding from one to ten gallons. For ordinary use one gallon of this paste is dissolved in twenty gallons of water before it is ready for the spray-pump. If used on plums or peaches while in foliage, the solution should be 50 per cent weaker, otherwise leaves will be burned. By adding six ounces of Paris Green to every fifty gallons of diluted Bordeaux mixture, all insects which bite the leaves or fruit can be killed with the same application, but care must be taken in using Paris Green anywhere.

A first-class knapsack spray pump may be bought from almost any dealer for $8 or $10, which price should include six feet of hose with nozzle. It makes an ideal pump for home use. An extension rod for higher trees can be added for $1.50.

Fruit trees should be sprayed three times every spring. First when the buds are swelling, then when leaves are sprouting out, the last application being made after the blossoms have fallen. Never spray while the trees are in bloom; it kills the bees and you will have no fruit. Trees affected by San José Scale (a mite of an insect which burrows itself into the smooth bark and twigs of trees) is easily recognized in winter by the rough, ashy surface of the bark. Get a few pounds of whale-oil soap, two pounds of which dissolve in one gallon of hot water and apply it, warm, with a brush, to the trunk and larger branches of any tree affected. Spray the tops with this same solution. The chemical action of the potash in the soap will dissolve the armor of the scale, and free the tree from this pest.

Home-grown fruits have come to be the delight of every home gardener, and the old-time idea that they require more care than they are worth never lingers long in the mind of those who test the matter.

The formation wanted for dwarf fruit trees is the vase-shape

Blackberries of quality are one of the most satisfactory breakfast-table fruits

Wall-grown fruits take up little room and are interesting to cultivate

Growing the Finest Sweet Peas

THE WHOLE ART OF GROWING ONE OF THE MOST DESERVEDLY POPULAR GARDEN FAVORITES—VARIETIES THAT HAVE BEEN TRIED AND FOUND TRUE, IN THE VARIOUS COLORS

By Edwin Jenkins

Superintendent of "Bellefontaine" Gardens, Lenox, Mass.

Photograph by Nathan R. Graves

EVERYONE who has a garden, large or small, should not neglect planting Sweet Peas, for there is hardly another flower giving more pleasure to the grower for the small expenditure necessary for its successful cultivation. Almost every day through a season of three or four months this beautiful annual will lend notes of varied color to the landscape, and supply the house with cut-flowers of exquisite fragrance.

Passing from its decorative merits to the cultural methods, which, as here set forth, are the result of the writer's own experience in specializing on the subject, in which there have been no particular soils or advantages other than those met with in common almost everywhere, it is interesting to note that by following the methods described, sprays producing seven flowers each were produced in quantities of bloom on strong vines from nine to ten feet in height.

PREPARING THE SOIL

In preparing the soil to receive seeds for Sweet Peas one does not have to go back as far as Oliver Wendell Holmes' estimate of the beginning time of a man's education—a hundred years; however, it is necessary to begin in the autumn before if we would hope for the most perfect plants.

Having selected the planting plot (which can stand a little shade, as the plants will be the better for it in hot weather, and such varieties as the "Henry Eckford" will also be set off to the best advantage thereby), lay out your rows from four to six feet apart, depending on the extent of the area at your disposal. Then place stakes at each end of the rows and open up trenches two feet wide and thirty inches deep. As the bottom soil for eighteen inches is scarcely fit for anything in most sections of the country, it should be turned out to form paths between the trenches, first removing the good soil from this section to a depth of nine inches, which, with the good soil first taken out in trenching, will probably fill the trenches again. But in replacing the dug-out soil mix with it some well rotted stable manure, and about 100 pounds of plain superphosphate to every hundred feet. Likewise add a half bushel of fine lime to counteract the acidity of the soil, and to keep away worm pests of all sorts. The soil, and the manurial additions to it, should be made as fine as possible for out-door seed-sowing.

BUYING THE SEED

As the cost of the seed forms but a small portion of the total cost of growing the plants, it is foolish economy to invest in cheap seeds that one does not obtain from a reputable seedsman, whose business depends on his integrity in keeping up to standards, and whose word and recommendation therefore it is pretty safe to trust. As an ounce of Sweet Pea seed will contain over four hundred potential plants, it will be seen that this quantity will be sufficient for a good display of any variety in any good-sized garden, as in the planting these seeds will be about nine inches apart.

One of the Spencer types. Choose your varieties carefully and keep the colors separated for the most satisfactory results

SOWING THE SEED

One can hardly be too early in the matter of out-door sowing. So long as the ground is dry enough to walk on without clinging to shoes and garden tools, the soil will be safe enough to begin planting in. Take a garden line and run it along the trenches of prepared soil to make possible opening up the drills, to a width of nine inches and a depth of four, in a straight line. In this drill sow the seed thinly. After covering with earth press the soil down firmly on the planted seed, after which place a mulch of litter over each row. This will prevent the ground below from drying unduly, and cracking, besides furnishing protection to the young plants as they push their way up.

CHOOSING VARIETIES

It is not always an easy matter to pick varieties as there are so many to choose from, each differing (perhaps in only a slight degree) and many seeming, to the amateur, to be nearly identical one with another. But there is some consolation in knowing that no one will have room for all varieties and that even the most intense enthusiast would not wish to attempt to grow them all, were it possible.

White: Dorothy Eckford, Nora Unwin, White Spencer.
Pink: Countess Spencer, Gladys Unwin, Bolton's Pink.
Primrose: James Greive, Primrose Spencer, Mrs. Collier.
Rose: John Ingman, George Herbert, E. J. Castle.
Scarlet: Queen Alexandra, Marie Corelli, King Edward.
Maroon: Black Knight, Othello, Duke of Westminster.
Orange: Miss Wilmott, Helen Lewis, St. George.
Light Blue; Flora Norton, Mrs. George Higginson, Jr., Romolo Piazzani.
Dark Blue: Lord Nelson, Navy Blue, Captain of the Blues.
Variegated Blue: Helen Pierce, Prince Olaf, Phenomenal.
Lavender: Asta Ohn, Frank Dolby, Lady Grisel, Hamilton.

The above may be recommended as furnishing varieties that will produce delightful results in any garden.

The vines, which always require support, are the better for early attention in this matter. It is doubtful if anything surpasses the old-fashioned method of brush support, but brush

(*Continued on page* xvi)

A good hedge is more beautiful than any wall man can devise—one of Nature's own bits of living architecture

The Essentials of a Good Hedge

CHARACTERISTICS OF ALL THE PLANTS COMMONLY USED FOR HEDGES—HOW TO START THE PLANTS, HOW TO CLIP AND HOW TO MAINTAIN A STURDY, COMPACT GROWTH

BY J. J. LEVISON, M. F.

Arboriculturist, Brooklyn Park Department

Photographs by Henry Troth and Nathan R. Graves

THERE is no better way of marking the boundaries of a lawn, or of a garden, or of securing some privacy to the premises surrounding a house, than by means of a hedge, so thoroughly in keeping with landscape effects, only giving place, occasionally, to the stone wall, and even then almost always requisite to setting off the wall's advantages.

The careful selection of a hedge, with consideration from all points, and its maintenance concern us here. The ideal hedge has much to live up to, but no matter how careful the selection of the species may be, if the hedge chosen is not tenderly cared for it will really turn out to be no hedge at all, but only a row of thin-foliaged sticks. There are the conditions of soil and of climate, of exposure, of preservation against insect and fungous diseases to think about, longevity to encourage and compact growth to coax forth. Many of the hedge plants we see fall short of having been encouraged by thought of these matters, and others seem bent on evading man's diligence. The Hawthorn, for instance, is constantly menaced by scale, the Lilac by mildew, the Boxwood with red-spider, and Spruces continually lose compactness at the base of their trunks. To avoid all the natural pitfalls, and the stubbornnesses of some of the plants that otherwise might make good hedge-growths, one must choose carefully and with anticipation of the conditions of a plant's future growth.

Early spring is the proper time to plant your hedge. The soil should then be enriched with additional black loam and the plants set in very carefully at a distance of twelve to eighteen inches apart for low hedges, and at ten to twelve feet apart for tree hedges. Do not plant too close, if you wish your hedge to look compact with plenty of lateral shoots. The roots should be cautiously protected from exposure to wind and sun and carefully spread out when set into the ground. The earth should then be firmly trodden in to keep the plants in place.

If the plants happen to be of a species like Privet, which will stand heavy clipping, cut off the shoots to a distance of three inches from the ground immediately after planting. This will establish an equilibrium between the supply and demand of sap in the plant, and thus enable its diminutive root the better to adapt itself to the new soil. This form of cutting will also insure the more compact growth of all sides of the hedge.

The following year the plants should be cut again, a little less heavily, and by the third year the permanent shaping of the hedge may be commenced. With plants that grow loosely, like

the Barberry, it is only necessary to make the plants uniform by clipping all such straggling shoots as have grown faster than others.

The after care of the hedge consists in keeping out all weeds, and in trimming the plants to induce bushy growth near the base. This is very important, particularly with young hedges. The hedge should also receive frequent cleaning so no insects can gather there and remain to despoil the growth.

General trimming of established medium-sized hedges is necessary at frequent intervals in order to insure the formation of lateral shoots for a dense appearance. The work can best be done in early spring while the sap is still down. The formal hedge of Privet and similar species should always be cut in some form of a triangle in order to obtain the greatest exposure of surface to sun and light and thereby securing a more vigorous growth of all parts of the hedge. The loose hedge of such a species as the Barberry needs just to be kept down to uniform shape by the removal of the stragglers. Where high stumps are seen protruding from old hedges, they should be removed and the more vigorous younger shoots allowed to take their place. All these large wounds and cuts should be covered with coal tar to prevent disease taking hold of the plants and insects from finding an easy entrance to the interior of the plant. Coal tar is preferable to paint for this purpose because the tar has an antiseptic as well as a protective influence on the wound, while the paint only remains on the surface, drying up in course of time and eventually peeling off.

An annual mulch of leaf-mold or well rotted stable manure, put on before the ground freezes, is also desirable for the maintenance of good hedges, and in case of Rhododendrons and the smaller evergreen plants, protection from wind and extreme cold during the winter months will be found helpful to the growth and even necessary at times.

Most of the deciduous plants will stand exposure better than the evergreens.

The accompanying lists have been compiled, after much thought, with the intention of suggesting the best hedge-plants for various purposes.

DWARF HEDGE-PLANTS—DECIDUOUS

Japanese Barberry (*Berberis Thunbergii*). Dense, low shrub; brilliant red berries; hardy.

Cranberry Bush (*Viburnum opulis* var. *nanum*). Compact; scarlet color all winter; hardy.

A Spruce hedge, properly planted and trained. Trim your hedges in this triangular form to secure light and air to the lower branches

Japan Rose (*Rosa multiflora*). Compact; thrives in poor soils.

EVERGREEN

Dwarf Box (*Buxus sempervirens* var. *nana*). Well suited to edging.

Dwarf Juniper (*Juniperus Sabina* var. *fastigata*). Well suited to edging.

Dwarf Juniper (*J. Virginiana* var. *tripartita*). Well suited to edging.

Dwarf Cedar (*Retinospora filifera aurea*). Beautiful golden color.

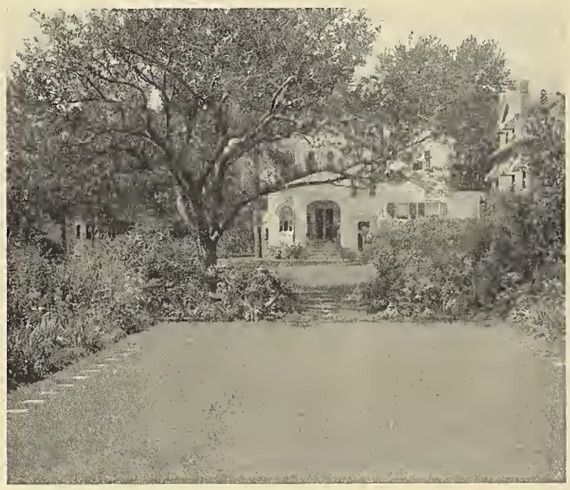
(*Continued on page* xvi)

The hedge as a boundary marker adds a desirable air of privacy to any premises

The California Privet, quick growing and hardy, is an admirable hedge for every purpose

We are all too apt to consider a fountain as a garden luxury beyond our means. Given an adequate water supply, a simple concrete basin of this type may be built very inexpensively. Chas. W. Leavitt, Jr., landscape architect

Mr. J. B. Mott's home at Bellport, L
the English type beyond which a
door swimming-pools in America



An interesting variation of the usual garden is shown above, where instead of being in path-divided beds, the flowers are massed around an open grass plot, edged with stepping-stones

It is an idea full of real hospitality that provides a home flower garden flanking the central path which is the main entrance to the house

Whether your garden is large or s
through the introduction of a lo
in an architectural feature

If your house is of the Colonial type, nothing will so well serve to bring the garden into harmony with it as a white-painted picket fence and arched gate

Water lends an invaluable charm to any garden, particularly when it is made to serve as an opportunity for informal bridges and rock-edged ponds

has adjoining it a formal garden of
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l gain enormously in effectiveness
is that provides a vista terminating

The garden at "Blair Eyrie," Bar Harbor, Me., designed by Andrews, Jacques & Rantoul, architects, contains at one corner a tea house, from which, over the foreground of flowers, one may enjoy a distant view of the mountains

One sees pergolas of all materials and all types in present-day American gardens, but seldom a more effective crossing feature than this one of octagonal plan

Of all pergola types that modern ingenuity has developed, the combination of white plaster columns with dark creosoted beams is probably the most effective

"Willowdale," the summer home of Mr. Harry B. Russell, architect, on the shore of Cape Cod, contains a typical old-fashioned garden, where the flowers are massed informally along the grass paths

If you are fortunate enough to have an old well in your garden you will do well to make a feature of its top and covering as Mr. Chauncey Olcott did with his

S WORTHY OF EMULATION

We are all too apt to consider a fountain as a garden luxury beyond our means. Given an adequate water supply, a simple concrete basin of this type may be built very inexpensively. Chas. W. Leavitt, Jr., landscape architect

Mr. J. B. Mott's home at Bellport, Long Island, has adjoining it a formal garden of the English type beyond which a grass path leads to one of the few private outdoor swimming-pools in America

The garden at "Blair Eyrie," Bar Harbor, Me., designed by Andrews, Jacques & Rantoul, architects, contains at one corner a tea house, from which, over the foreground of flowers, one may enjoy a distant view of the mountains

An interesting variation of the usual garden is shown above, where instead of being in path-divided beds, the flowers are massed around an open grass plot, edged with stepping-stones

It is an idea full of real hospitality that provides a home flower garden flanking the central path which is the main entrance to the house

Whether your garden is large or small, it will gain enormously in effectiveness through the introduction of a long central axis that provides a vista terminating in an architectural feature

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The fleecy clouds of flowers of the *Clematis paniculata*, its rapid growth and hardiness make it one of the best vines we have for all purposes

There is not a lovelier vine in the world than the Wistaria with its wealth of perfect blossoms which reward one for its slow growth

Large-flowered varieties of the Clematis give notes of color to the sides of house and porch, and produce attractive foliage as well as blossoms

The Best Vines for Every Place

CLIMBERS THAT ARE HARDY AND MAKE A WINTER SHOWING, AND THOSE WHICH DIE DOWN EACH YEAR—A LIST OF THE TWENTY-FIVE THAT FILL EVERY NEED

BY EDWARD C. CARROLL

Photographs by Nathan R. Graves and others

WHEN you come to plant your garden, make your lawn, set out your trees and shrubs, and have finished building your garden walls, fences and trellises, there will be the vines to take into consideration.

Perhaps no branch of garden adornment is more carelessly attended to by the amateur than that of selecting the proper vines for the premises. It is always so easy to fall back on Virginia Creeper, or to feel that with a little spatter of Wistaria the whole field has been covered. Nevertheless, looking into vine-lore at planting-time is well worth while.

There are, generally speaking, two sorts of vines; those which are hardy and shrub-topped, and those which die down in winter to spring up again the next season, or which are annuals that have to be started from seed each year, though some of these may be self-sowing.

The careful planting of vines adds greatly to the beauty of any place

The following list of twenty-five vines is sufficiently inclusive, in both divisions, for almost all vine planting purposes.

SHRUB-TOPPED VINES

1	Akebia	(*Akebia quinata*)
2	False Bittersweet	(*Celastrus scandens*)
3	Virginia Creeper	(*Ampelopsis quinquefolia*)
4	Boston Ivy	(*Ampelopsis tricuspidata*)
5	Clematis	(*Clematis paniculata*)
6	Virgin's Bower	(*Clematis Virginiana*
7	Climbing Euonymus	(*Euonymus radicans*)
8	Wild Grape	(*Vistis vulpina*)
9	English Ivy	(*Hedera Helix*)
10	Silver Vine	(*Actinidia arguta*)
11	Honeysuckle	(*Lonicera sempervirens*)
12	Honeysuckle	(*Lonicera flava*)
13	Honeysuckle	(*Lonicera Japonica*)
14	Kudzu Vine	(*Pueroria Thunbergiana*)
15	Dutchman's Pipe	(*Aristolochia macrophylla*)
16	Wistaria	(*Wistaria sinensis*)
17	American Wistaria	(*Wistaria speciosa*)
18	Trumpet Creeper	(*Tecoma radicans*)

VINES WHOSE TOPS DIE DOWN IN WINTER (NORTH)

19	Moonseed	(*Menispermum Canadense*)
20	Hop	(*Humulus Lupulas*)
21	Japanese Hop	(*Humulus Japonicus*)
22	Scarlet Runner	(*Phaseolus multiflorus*)
23	Morning Glory	(*Ipomœa purpurea*)
24	Moonflower	(*Ipomœa Bona-nox*)
25	Thunbergia	(*Thunbergia alata*)

Vines should never be planted where they are not really necessary nor where they will not add beauty to the premises, nor yet again without due regard to the grouping of varieties. One does

not always wish to turn the side of a house into a flower garden by a vast expanse of large-flowering Clematis, for instance; restraint is the better course. Let your flowering vines appear here and there in smaller patches, or around your porches, giving more area to vines such as the Boston Ivy, with its expanse of green, and the Kudzu Vine with its ability to cover an extensive space in a wonderfully short time.

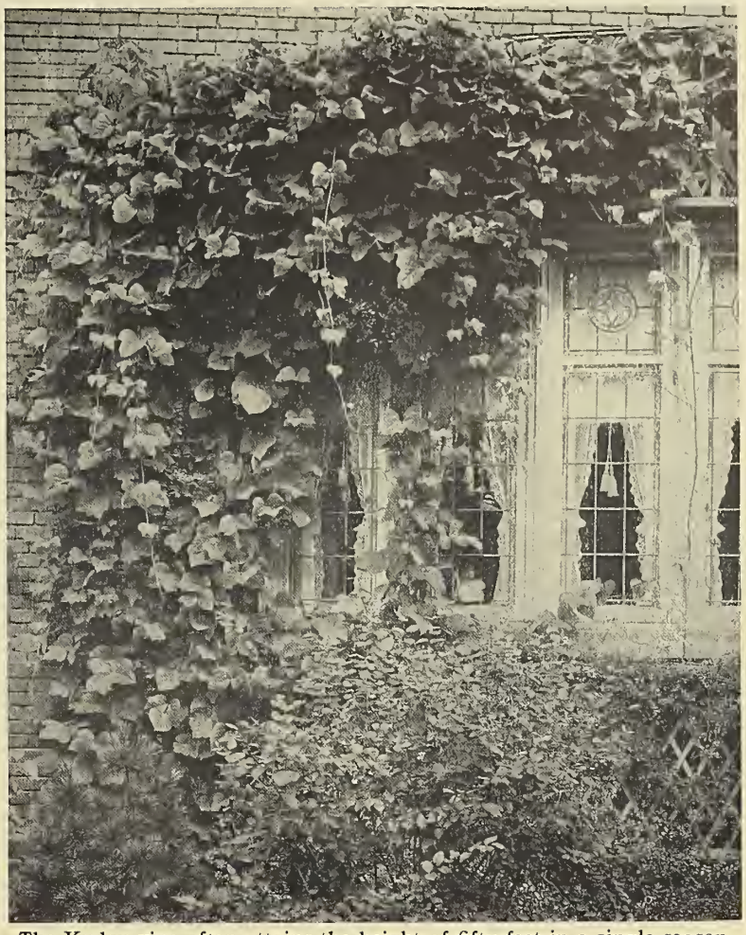
Again, too many varieties and species should not be planted together unless it is desired to obtain a jungle effect, which is hardly what one strives for in this day of decorative discretion. The Japanese are masters in the art of attaining satisfying effects—next to them come the English gardeners. As nature has the whole world for her premises, we must not be led into the mistake of attempting to translate her swamp, forest, and hillside effects to our lawns and gardens without some consideration for adaptation.

Those vines which require winter protection must not be planted before you ask yourself—that is if you live in the far northern parts of the country—if you wish to have your porch and house-fronts littered (as surely they will have to be when tender vines are met by chilling winds and winter's snows) by straw and matting protections. For instance, the winter sun is too bright for the English Ivy in its dormant season, wherefore one often sees whole house-sides that in summer were green with the Ivy's beauty, yielding, in winter time, to the necessity of an ugly covering of flat mats. Nevertheless we do not plant half enough of this vine, and there are always many nooks and corners of walls and spots that are fairly well sheltered where it will thrive admirably. Apropos of vines and the seasons, the Silk Vine (*Periploca Græca*) retains its foliage very late into the fall, and is an excellent vine for arbor, stump, trellis or tree-trunk.

It must not be forgotten that vines need cultivation in common with other plants. It will not do merely to let them struggle along the best they can. The soil around them must be worked carefully, fertilized, and protected by mulches to retain moisture in summer and to protect the vines from frost in winter. Then, too, it will be found that some of them are of very slow growth, like the Wistarias, while others, like the Kudzu Vine, reach out with amazing rapidity. Every year the seedsmen and nurserymen are paying more attention to this important subject, so the garden and lawn planter has always a variety to select from.

If vines are to thrive well against the house-side they should not be planted too near the foundation. It is far better to run them out at least ten inches from the walls in order that the roots may have a chance to grow out in all directions from the stalk. Before new growth begins with each succeeding season, some of the old wood of shrub-topped vines should be cut away, that new shoots may have a fair chance when their time comes.

Summer pruning, or pinching, as it is more often called, is the most advisable. The ends of the canes (vine branches) should be kept tied to their place, and when dense growth is desired heavier pinching back may be resorted to.

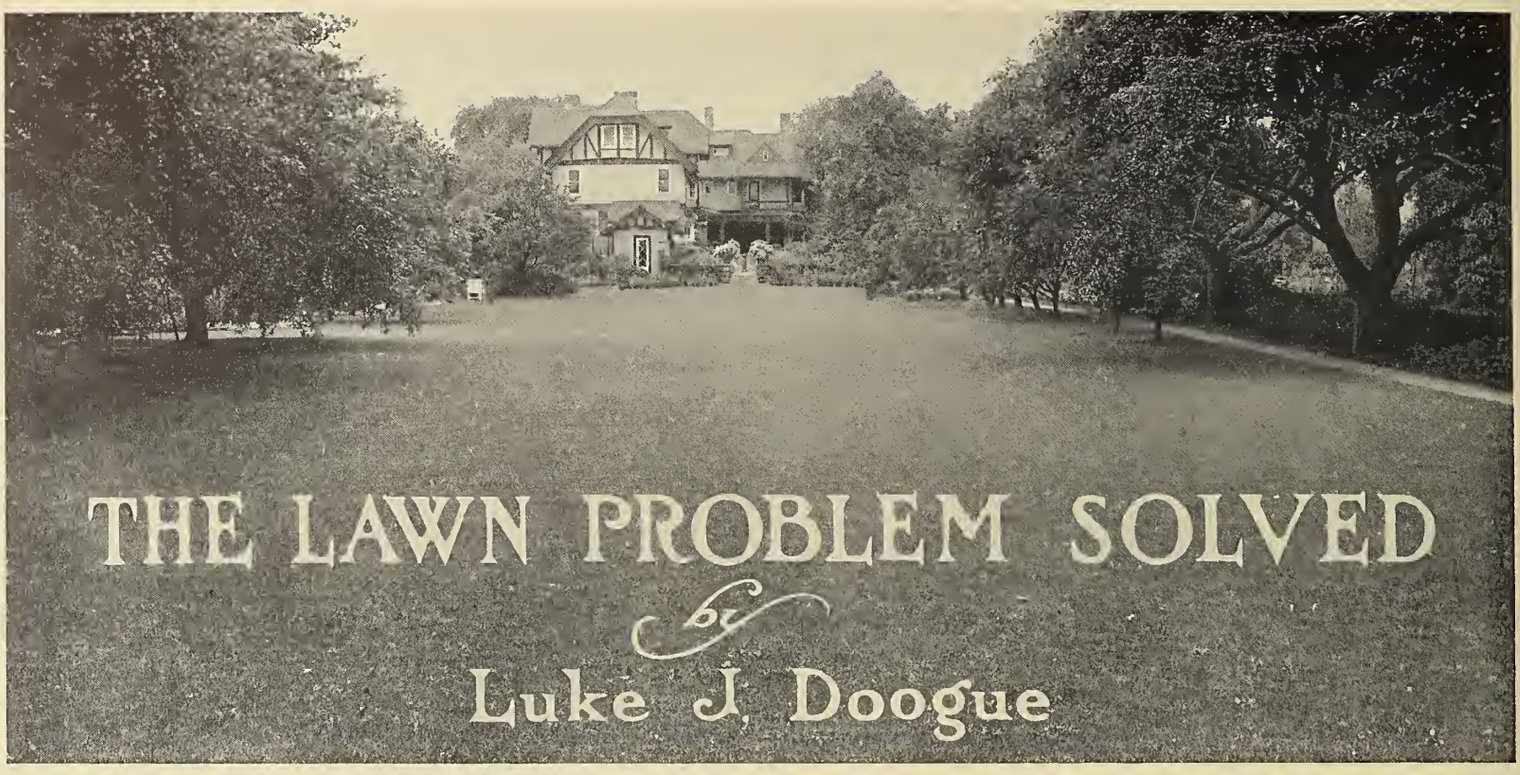


The Kudzu vine often attains the height of fifty feet in a single season and is the most attractive of the rapid growers

The Boston Ivy (*Ampelopsis tricuspidata*, or *A Veitchi*, as it is more often called) thrives in almost any soil

Hall's Honeysuckle (*Lonicera Halliana*) climbs to a height of fifteen feet. Its blossoms are very fragrant

The Dutchman's Pipe (*Aristolochia macrophylla*) affords dense shade by reason of its uniformly large-sized leaves



THE LAWN PROBLEM SOLVED

by

Luke J. Doogue

ESSENTIAL REQUIREMENTS OF A VELVETY PIECE OF TURF—THE GRASS SEED TO BUY AND THOSE TO AVOID—SPRING TREATMENT THAT WILL BRING A SUCCESSFUL LAWN THIS SEASON—HOW TO CUT GRASS AND HOW TO SAVE RAKING IT

Photographs by Nathan R. Graves and others

WHEN the average man buys a package of grass seed at a grocer's and shakes the aforesaid seed on the ground he often imagines that the result will be a velvety lawn that will make his neighbors die of envy. But he has reckoned without counting that warm weather will probably find his seed producing weeds and a few lonesome looking blades of grass. It is scarcely an exaggeration to say that eight out of ten people hope for grass on their lawns from just such thoughtless beginnings.

If you want grass to grow you must make up your mind to work for it, week after week, and month after month, until a perfect lawn is achieved. No absent treatment will effect anything short of a meadow, but consistent attention will produce a turf to be proud of.

If you have a patch of ground that you have been accustomed to call a lawn (though you feel shamefaced every time you call it such, by reason of its neglected and bare appearance), and if in the spring it seems to start off well, only to burn out later in spots, while the weeds get so numerous that you give up in disgust and wait for another year, hoping for better things, you may be sure that the trouble lies with your not having taken the time to spend on the matter. As a result of this neglect year after year you have had a symphony of weeds and bare spots.

It is better not to rake the cuttings from a lawn, for even a wooden rake tears the little grass plants from their roots. Put a grass catcher, costing about $1.75, on your mower

Now the nearest thing by way of comparison to a lawn is a bed of plants that you set out in your garden every spring. When you think it is planting time you go to this bed with spade or fork and turn the earth up deep from the bottom, putting in plenty of well rotted manure, thus ministering to the soil according to its needs. Then you set out the plants, and if weeds grow up you dig them out, after which you water the spot intelligently. For this labor your reward comes to you in the shape of an abundance of bloom and foliage.

Just as truly is a lawn a bed of plants needing an equal amount of treatment. Grass is nothing but a collection of thousands of little plants crowded together, which must have nourishment, and from which the weeds must be taken. Likewise the soil must be given water as it is needed, and the earth must be made mellow for the roots, to a good depth. It makes no difference how much you pay for your grass seed, how good or bad it is, or what kind of fertilizers you use, if the bed is not properly prepared in the first place. Without this fundamental preparation grass plants will not grow, or if they do, will not thrive.

RENOVATING AN OLD LAWN

If you have one of these misfit lawns, examine the soil, and if you

find the loam shallow and the subsoil as hard as a rock, go at it and turn it over to a good depth, putting into it plenty of manure. Manure may bring weeds, but it is scarcely surpassed by any other fertilizers.

When you see a velvety lawn it is safe to say that a lazy man never had anything to do with it. Making a lawn is not the lazy man's forte. If your grass patch is all right with the exception of certain bare spots, treat these as you would the whole area were you to do over the whole lawn. If you don't wish to dig up these spots again to any depth, as you should, at least rake into it some fresh grass seed.

After every winter the lawn needs to be rolled well. This is done to pack the roots of the grass well into the earth so they will be able to draw up the moisture they require from the depths of the soil. If rolling is not done the grass is sure to burn out. The alternate thawing and freezing during the winter heaves the sod, breaks the roots and pushes them out of the loam. Rolling overcomes this trouble.

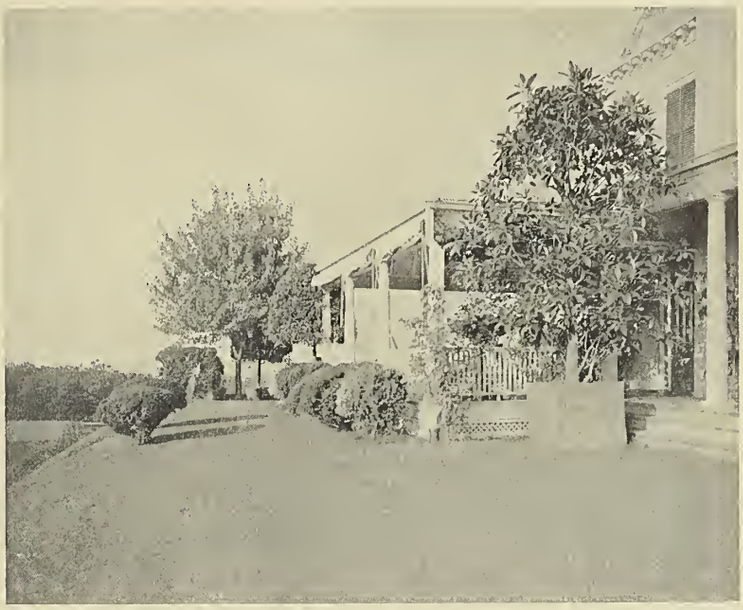
THE BEST SEED

It is all very well to say "get the best seed possible," but it is not so easy to predict just what that seed will produce. It is not the prettiest package that holds the best seed, neither can the price you pay keep down the number of weeds that generously pop up. Grass seed is a prize package at best, for in some of the combinations that are put out under the most alluring names you are apt to get a choice collection of floor sweepings and weeds, with scarcely a sprinkle of grass in the mixture. Therefore procure from a reliable dealer clear Red Top and mix with it a very little Kentucky Blue and White Clover (very little Clover). Sow this in the proportion of about three bushels to the acre. There is nothing better than this, but you will probably have to go to a horticultural supply store to get it. Grocery stores are always short of this class of goods.

In sowing seed try to spread it evenly. Throwing it around carelessly, trusting to chance to arrange it, will result in a patchy appearance. Don't try to sow grass seed on a windy day, for if you do you will find little of it where you wish it.

CUTTING AND RAKING

When cutting your grass you will find it a great saving to have some sort of a grass catcher on your lawnmower. One can be made easily, but very handy ones are sold at a small price. They prevent the wear and tear to a lawn that results from the hard raking necessary when not used. If you prefer the rake it is best to use a wooden one, as iron teeth do great damage to a heavy sod.



Grass on terraces and under trees is the most difficult to keep luxuriant There are special seed mixtures for such locations

In watering, either use a fine spray or lay the hose on the grass, with a board under the nozzle, and let the water flow forth slowly, giving it time to soak into the soil. A heavy stream washes out the loam, and does great injury to the lawn.

For a spring dressing to an old lawn use hardwood ashes and bone meal. Use the ashes early, and spread them on until the grass looks white.

If the ashes are strong in potash they may burn the grass, but the chances are that you will experience no damage from this cause. Few ashes found in the market run high in potash. Spread the bone meal some weeks later, liberally. These two will work wonders for your lawn and your grass will grow thicker and be better color from their use.

As a final word one cannot do better than to repeat: The only way to have the sort of a lawn you will be proud of is to make sure of a good depth of soil—and it is astonishing how soon after ploughing up a lawn you can have thick grass again. But, above all, chase the weeds night and day.

Roll your lawn in the spring and get after the weeds. When cutting them out, drop a little grass seed from a can sifter into the hole

Stable manure is the best thing for a lawn but unsightly. Pulverized sheep manure, as used in the foreground, is practically invisible

When the garden-maker knows what shrubs and flowers to plant in shaded places no longer will there be dark, bare and unattractive spots to mar the landscape of the home.

Flowers and Shrubs for Shaded Places

WHAT TO GROW ALONG THE NORTH WALL IN THE TREE-SHADED CORNER OR IN THOSE SUNLESS PLACES THAT EXIST ABOUT EVERY HOME

BY IDA D. BENNETT

Photographs by Thomas W. Sears and others

THE garden-maker or lover of plants and flowers has often to meet the problem of planting for shaded places, especially if the area before him is a limited one, and an abundance of sunshine cannot reach all its nooks and corners. The list of plants which require or prefer complete shade is not large, but there are many which do well in partial shade.

SHRUBS

Generally speaking, few shrubs or dwarf trees thrive as well in shaded positions as in open ones, yet almost any hardy plant suited to the locality in which it is grown will do well on the north side of a building or fence, or under trees where the air and sunshine from east or west is not entirely intercepted, or where the branches of the trees do not overhang it.

A high fence or wall often proves a decided advantage as it protects the wood of the shrub from the winter sun which often proves more injurious than the cold, in which connection it may be noted that the pressing of large shrubs or small trees about the base of evergreens or soft maples which have been trimmed high is of protective advantage to these trees.

One of the most valuable acquisitions to the list of hardy flowering shrubs appears in the new "Snowball" Hydrangea (*H. arborescens sterelis*), a variety differing markedly from the well known *H. paniculata grandiflora* in its greater freedom of bloom, whiteness of the flower, quality of foliage and the fact that it is in bloom practically all summer. It requires more shade than the older form. Any good soil containing an appreciable amount of humus will grow it successfully if well enriched with barnyard manure, and kept in a moist, though not wet condition during the growing and blooming period. Less exacting as to soil and moisture, and succeeding well under the shade of trees, is the Snow Berry (*Symphoricarpos racemosus*) and the Indian Currant (*S. vulgaris*).

Some of the Snowballs (*Viburnum*) can be depended upon to give good results in shady places, and the Mahonia (especially *Berberis ilicifolia*) is an evergreen-leaved shrub most at home in shaded positions and a light dry soil. The leaves of this shrub are especially beautiful for table decoration.

The Golden Chain (*Cytisus*) is a charming small tree clothed in June with long racemes of golden blossoms, which finds its most congenial habitat in a cool and shady spot. It is an especially good tree for town gardens. Dogwood delights in the presence of tall trees, whose branches grow high above its head, as every one who has seen it in springtime well knows.

The Wintersweet (*Calycanthus fragrans*) does well in shaded places and bears its fragrant curious brownish yellow, purple-streaked flowers in June and at intervals thereafter. The varieties of St. John's Wort (*Hypericum*) do well in the shade, and some

of the more recumbent varieties, like *H. Moserianum*, are fine for planting in front of shrubs of more robust growth, as well as for carpeting barren spots. The *Hypericum* blooms continuously throughout the summer, and is one of the most desirable hardy plants we have. *H. aureum* has a stiffer, more compact growth and golden-yellow flowers in cymes in July; preferring a rocky, moist soil and a shady place, while *H. hircinum* does best in dry soil and bears its yellow flowers in clusters of two or three in August.

The golden-leaved Syringa (*Philadelphus*) is a beautiful thing when contrasted with a background of dark green and does well in partial shade. Like most hardy shrubs the Syringa is not particular as to soil, almost any good garden soil growing it successfully.

Rhododendrons are excellent shrubs for shaded places. They require a deep, well drained soil which should contain a generous proportion of leaf mold and be quite free from lime. Where this latter is present in the soil the Rhododendrons should not be planted, or, if they are desired, the earth should be removed from the beds to a depth of two feet and suitable soil supplied. The Azalea, while requiring, practically, the same soil and conditions as the Rhododendron, is not so sensitive to the presence of lime in the soil.

FLOWERS

Where there is only shade in which to create a garden, one will, naturally, wish to lighten it up as much as possible and by a glow of color compensate for a lack of sunshine. For this purpose there is nothing better than white and yellow and the list of shade-loving plants affords some fine examples of each color.

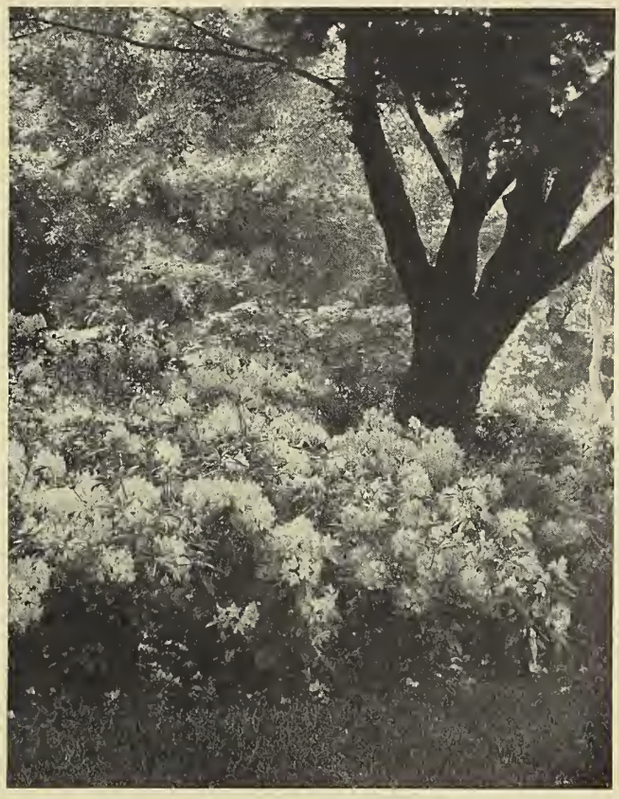
The Golden Glow, which would seem to require the fullest amount of sunshine, will grow and bloom with little loss of vigor in a partially shaded position; and that glowing scarlet flower, the Salvia, does remarkably well on the north side of a wall or building.

For positions where a tall-growing plant seems called for, *Stenanthium robustum* may be recommended. This hardy perennial is a recent introduction which sends up tall flower stems, four or five feet in height, crowned with panicles of fleecy-white flowers which are wonderfully effective. It requires a rather moist situation or should be given abundance of water during its season of growth and bloom.

Somewhat resembling it in the foamy-whiteness of its flowers, the Giant Knotweed (*Polygonum*) affords abundance of bloom during August and September. The plant is very tall-growing, sending up blooming stalks six and seven feet in height clothed with large leaves from which spring large, drooping clusters of foamy-white flowers. A rose-colored form of *Polygonum* is found in *P. bistortum superbum*, and a dwarf-growing form, suitable for the edging of borders, in *P. compactum*. This later variety is easily raised from seed and so may be had in quantity to use as an edging for beds of tall-growing plants or to break up the formality of what might otherwise be too stiff a planting of erect growths.

A beautiful, tall-growing flower with blue Forget-me-not-like blossoms is found in the Dropmore variety of the Italian Borage (*Anchusa Italica*). Unlike the Forget-me-not, however, the blooms of this lovely plant are an inch or an inch and a quarter in diameter, borne in large spikes on stems five and six feet high. This is an especially effective plant to row in connection with the *Stenanthium*.

The Monk's Hood (*Aconitum*) rejoices in partial shade and its flowers are much finer and deeper in hue if afforded a congenial location. There are some very good new forms of this old-time favorite, but the nearer the flowers approach to the clear, ultramarine blue, the more satisfactory they will prove. Its gem-like clearness of ultramarine is really a wonderful color, and one seldom met with in flowers. Some varieties of *Delphinium* possess it and a certain form of *Browallia*. The dwarf *Lobelia speciosa* has it, but most blue flowers show azure or sky-blue tints and many verge too closely on lavender to be fairly considered blue. The newest *Aconitum* is *A. Wilsoni*, an introduction from northern China; this is entirely distinct from all other species and has the extremely dignified height of six feet, with very large flowers of a light violet-blue. It comes into bloom early in September. In striking contrast to this vigorous sort is the dwarf variety, *A. Fischeri*, which grows but eighteen inches high, and shows very large pale blue flowers. *A. Napellus bicolor* is a blue and white form very dainty and pretty. The earliest-flowering forms come into bloom in June and continue well into July, while the late-flowering forms remain in bloom well into October, thus giving a continuance of bloom scarcely exceeded by any class of flowers. It may not be matter of general knowledge that the *Aconitum* will give a succession of flowers after the first florescence has passed, if the plants are not allowed to form seeds. This species is benefited by frequent lifting and division. The old root dies out and new plants form about the old crown, which should be taken up and reset. Another point to be taken into consideration in growing the *Aconitum* is its proneness to bend, when fully grown, under the stress of heavy rain especially if accompanied by wind. It is necessary, for this reason, to afford the plants some support. The wire Peony supports are excellent for the purpose, or one may manufacture a home-made support of three or four neat stakes with wires run through them a few inches apart; these if painted green will not be at all conspicuous and will keep the plants in shape. The *Aconitum* is very difficult to lift, once it is down, as the stalks are brittle and inclined to break at the crown.

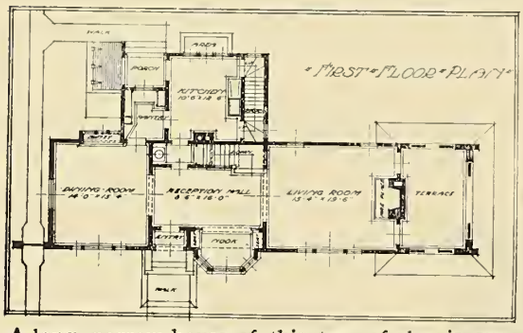


A mass of gorgeous blossomed Rhododendrons now grows where once there was a grassless plot under the thick-foliaged tree

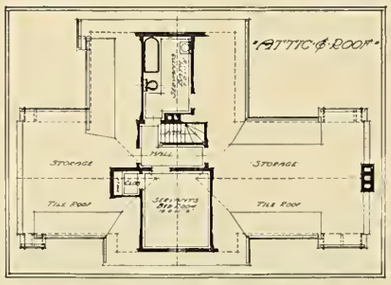
The varieties of the Bell Flower, (*Campanula*) are satisfactory plants for semi-shady places and some of the tall-growing sorts are highly ornamental. They have the advantage of being very easily grown and some of the varieties may be depended upon to come up year after year, self-sown, *C. Pyramidalis* being especially reliable in this respect and making a growth of five or six feet. It bears spikes of saucer-shaped blue or white flowers excellent for cutting, the white being especially attractive. They are the handsomest in foliage of all the Bell Flowers, their leaves being very glossy and shaped much like that of the violet. In early spring before the plants begin to run up, the low cluster of foliage is handsome. The *Campanula* is a

(*Continued on page* xxiii)

Rough-cast gray plaster walls, brick chimney and base, with lighter plaster in the half-timber gable over the entrance, and flat tile roof, form the rather unusual combination of materials used. In architectural style, the building has a strong suggestion of modern German work

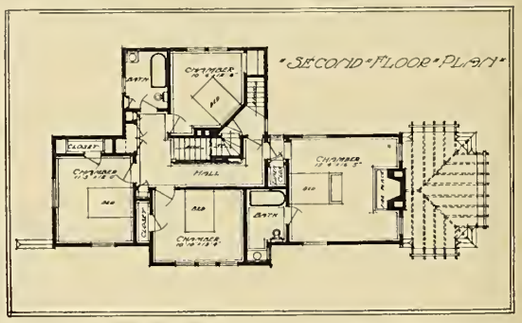


A long, narrow house of this type of plan is sure to be light, cheery and well ventilated. Its single drawback is the increased cost over a more nearly square plan



There is one servant's room and a bath in the third floor, with abundant storage space

C. Howard Crane, Architect



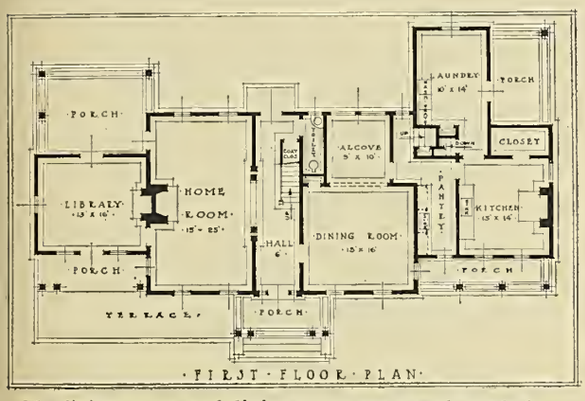
Four good bedrooms and two baths, with numerous closets, are included in the second story The closet marked "linen" seems better adapted to clothes space for the largest bedroom

With windows on the long sides and French windows opening upon the paved and latticed porch, the living-room suggests unusual cheer

The large reception hall, with its built-in seats and refreshing color scheme of white and gray, has an air of spaciousness and hospitality

A HOUSE AT GROSSE POINT, MICHIGAN

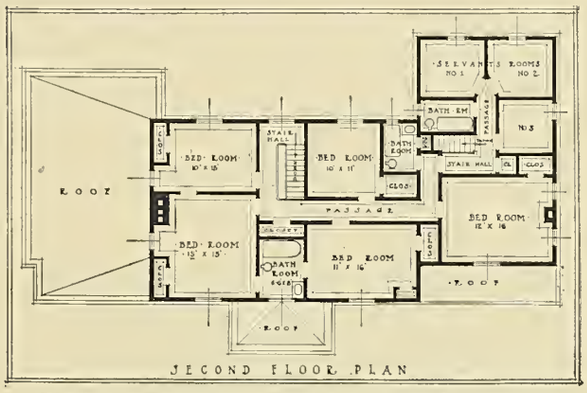
The front of the house was made lighter inside by removing the long front veranda, shown in the picture below, using the old columns and moldings of pure Greek contour in a simple entrance porch at the front door



The living-room and dining-room were each made by tearing out partitions between two rooms. At the right the whole service wing is new

A REMODELED FARM HOUSE NEAR NEW YORK

Alfred Busselle, Architect



It will be noticed that in the four corners of the old structure where the low roof was maintained the lower height has been given to closets

THE old farmhouse, with its splendid setting of lawn, and grand old trees, with an orchard behind, was substantial but uninhabitable. There was no plumbing, low ceiling, few and stuffy bedrooms, yet the available structure was worth $5,000 or $6,000. Two useless parlors became an airy living-room, the dining-room was expanded in a like manner; on the south end the bedrooms and closets became a library, with a porch facing the orchard.

The second floor presented greater difficulties.

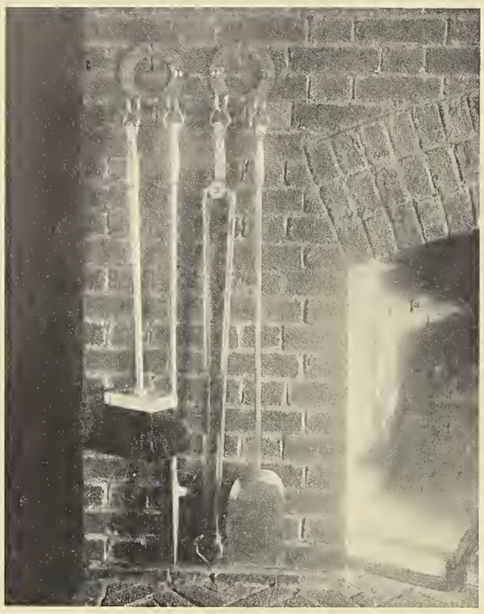
At the near corner an old bedroom and its closets were turned into a library, with a porch on either side

To remove the roof and raise all the walls meant oo great cost; but by lifting the center part, front and rear, like tent-flaps, the second story yielded four comfortable bedrooms and two baths. A modern wing gave another main bedroom and the servants' quarters.

The value of a well established setting, often with mature shrubbery, usually with old trees, suggests possibilities in remodeling many an old house where nature has done her part whether man has kept up his end of it, architecturally, or not.

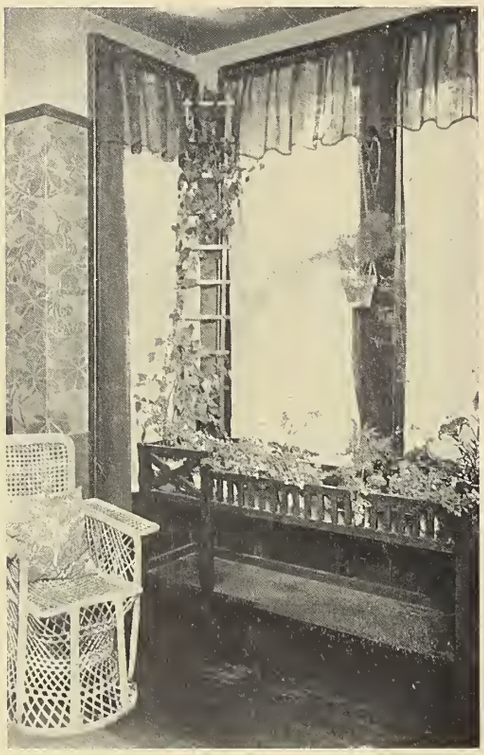
The Fireplace Tools

MOST people keep their fireplace tools in a brass rack on the end of the hearth. They are then conveniently ready for use and ordinarily not in the



A distinctive set of fire tools and a convenient way to keep them

way. Mr. Ernest E. Calkins, however, in one of the many fireplaces in "Upwey," his country home, which was described in the February issue, has designed not only the brass fire tools but another ingenious way of keeping them near at hand. Two heavy brass rings are nailed directly into the brickwork, the diameter of the rings being such as to bring the nails on the joints, and brass hooks for the four tools are welded into these rings. R. F.



A plant shelf that is an improvement upon all widths of window-sill

Hotbed Protection

IT may be of interest to readers of HOUSE & GARDEN to know that I have discovered that the laying of newspapers over the earth in hotbeds for the first few days after planting seeds therein materially aids their germination by keeping them from drying out before they have time to sprout. H. L. D.

Natural Bulb Planting

WE have a delightful country place, around an old Colonial farmhouse, and while there is nothing pretentious about it I doubt if there is a lovelier or more attractive place in the country. A few years ago I read, in a foreign newspaper, a paragraph that interested me very much. It suggested that planting bulbs here and there in the woods, on the edge of a copse and elsewhere about one's country home, would lead these bulb plants to naturalize in time. The writer suggested that one stand and toss from him a handful of bulbs, at a time in various directions, planting them where they fell, thus securing a natural arrangement, most delightful in effect when the bulbs came into blossom. I tried it and the suggestion worked like a charm. Now our place is more beautiful than ever in the springtime. Bulbs located in this way seem to have sprung up according to nature's own planting. L. B.

The Plant Shelf Problem

ONE sees many arrangements of potted plants to make attractive the sunny windows of our living rooms. Usually, however, the window-sill itself is not wide enough to support a medium size pot, and even if we put in a wider shelf the usual effect is rather untidy.

The illustration shows one of the most attractive solutions of the problem we have seen. The shelf is portable, and the well designed railing around the top of the shelf is one of its most attractive features, hiding, as it does, the unattractive pots, pans or boxes.

The little trellis that runs up at the corner is another unusual feature of this ingenious bay window arrangement. H. H.

The Insect-proof House

A HOUSE with windows carefully screened still had considerable difficulty from mosquitoes until it was discovered that they came down the chimneys and entered through the open fireplaces. Nets were made for the fireplaces and the difficulty ceased

C. K. F.

Ingenious

Hanging Pictures with Vertical Wires

I READ with much interest the article by Mr. Schell in the February HOUSE & GARDEN on "The Art of Picture Hanging." He mentions therein the advisability of hanging large pictures by means of two vertical wires instead of by a single wire running from the two screw-eyes up over one supporting picture-hook. There is no doubt that the appearance of large pictures, or in fact

The simple way to hang a picture from two hooks with one piece of wire

any pictures, hung with two vertical wires is far more pleasing. Some time ago I had occasion to hang a number of pictures in this way and naturally found it a tiresome matter to arrange the two wires so that they were precisely the same length. After I had covered all my walls with pictures hung in this way it occurred to me that the simple and natural way to secure the same effect would have been to run one wire from a picture-hook down and through its corresponding screw-eye, across back of the picture through the other screw-eye and up to another picture-hook. In this way the level of the picture could be adjusted at will after the height had been established. J. S.

Sash Support for Hotbed

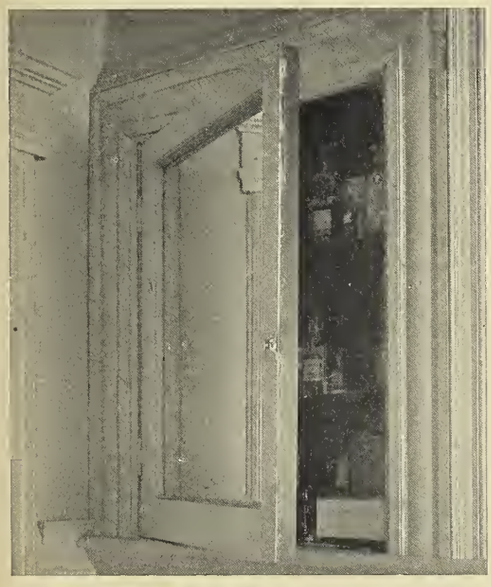
ONE of the best supports for slightly raising the sash of the hotbed is the clothes-pin. The forked part holds it firmly and prevents jarring or any-

Devices

thing else from loosening the support, causing the sash to slam down, often breaking panes of glass. K. G. C.

A Convenient Medicine Closet

THERE are, no doubt, many of your readers that have made use in building their homes of the fairly well known scheme of building a medicine closet within the space occupied by an ordinary partition. For those who are not familiar with this scheme of utilizing waste room—hollow space between a pair of studs in the wall—and also be-



A medicine closet in a partition that is roomy enough to hold large bottles

cause our own medicine closet in the bathroom has one or two unusual advantages, a photograph of it may be of interest.

It will be seen that a greater depth has been secured by building out the trim that surrounds the door opening an inch and a half beyond the face of the plaster. An additional molding around this trim will cover the joint and you will have space enough for the wider bottles—an advantage that the ordinary partition medicine closet lacks.

The second advantage of this particular device is the mirror that is set in the door frame. M. H. M.

Flowers Next to Hedges

I HAVE found that my English gardener sinks planks into the earth as an underground partition between hedges and shrubbery and any perennials that may be planted in front of them. In this way the roots of the hedge-plants and shrubs will not encroach upon those of the perennials, and take from the soil around them all the nourishment they should have, as they would do if some such measure of protection were not taken. H. W. L.

Growing Cornflowers

FOUR years ago when we were abroad we were so impressed with the beauty of the effect of the cornflowers growing in the German fields that early the following spring we made the experiment of growing a quantity of the seed in our pasture, along with timothy seed. Here and there we also sprinkled some poppy seed, and now both cornflowers and poppies seem to have become naturalized, and our fields are wonderfully beautiful, pleasant reminders of those we saw in Europe. Perhaps other readers of House & Garden would like to know of this. F. C.

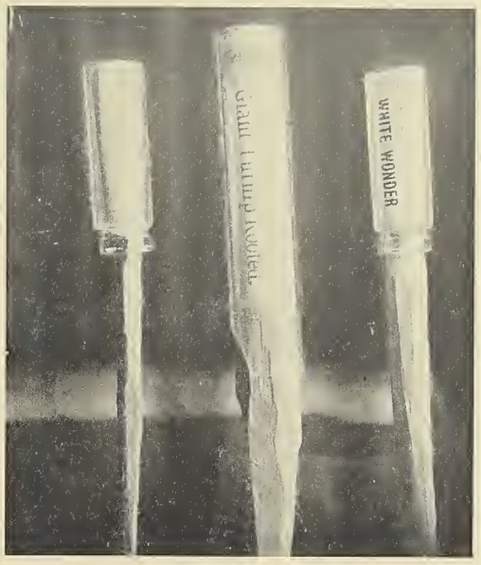
Lima Bean Trellis

FOR many years I planted my lima beans so they would climb up poles set in rows four feet apart, and the poles three feet apart. As we have rather a small garden I devised the following method to increase the output. I left the poles and planted the same number of plants to climb up them, but in addition I ran a string from pole to pole, about the height the plants usually grew up to, and then ran other strings from it to the ground, for additional plants to run up. Clothes-pins are so cheap that I found it better to use them than to make stakes to fasten these trellis strings to, to drive into the ground. Then between each pole in the rows set the plants about five inches or so apart, so they will run up the strings. You will be surprised at what an additional crop you will secure by this simple method which does not take much trouble to install. The turned head of the clothes pins make a capital arrangement to fasten the string to.

Permanent Labels

IN endeavoring to secure a permanent label which would be at the same time cheap and easily prepared, the following plan was hit upon. First secure a sufficient number of small bottles with corks. The small tubes that prepared photographic developers come in will do, or the one or two-drachm homeopathic vials may be secured at your druggist's. Wire and some small stakes with one end trimmed down to fit the necks of the bottles complete the equipment. Copper binding wire is best as it is very pliable and does not corrode when exposed to the weather.

For the seed bed, clip from the end of the seed package the strip bearing the name of the variety planted, slip this into the bottle, cork tightly and wire to a stake at the end of the row. Or if desired the bottle may be slipped over the end of the stake as shown in the accompanying photograph.



Save small vials to protect your seed labels from the weather

For trees, shrubs, etc., the bottle enclosing a label written with indelible ink may be wired to a branch, twisting the wire tightly around the neck of the bottle and leaving a long loop for the branch. Labels attached in this way may be left in place for years with no danger of injury to the branch to which it is attached. R. E. T.

Increase your yield of lima beans by training them on strings between the poles

Inside the House

Edited by Margaret Greenleaf

The Editor will gladly answer queries pertaining to individual problems of interior decoration and furnishing. When an immediate reply is desired, please enclose a self-addressed envelope

A Comprehensive Color Scheme

I HAVE been much interested in this department, and wish now to ask a few suggestions for myself. We are building a house arranged in the following way: Parlor, northeastern exposure; living-room across central hallway, southeastern exposure,; dining-room adjoining living-room, southwestern exposure; four bedrooms upstairs in the four corners of the house. The parlor to be finished in white; our furniture in this room is the Louis XIV shape, tapestry covering, with mahogany frames. The hall in oak, and the living-room and dining-room in oak with oak furniture.

We would like to have our walls all tinted at first, and beg to ask if you will suggest the colors which will be most desirable for the various rooms named. I may add that the fireplace in the living-room is in mottled brown brick. Would you be kind enough to furnish me with samples of the colors you may suggest?

I should also like to ask if any difficulty is experienced in making paper adhere to a wall which has been previously tinted. Also, would it be too much to ask further for suggestions of color and materials for door hangings, curtains, etc.? I send a stamped envelope for reply.

Before papering a wall that has been previously tinted it is necessary to have the surface thoroughly cleansed. If a water color tint has been used this is not a difficult task. Would you consider using paper in one or two of your rooms? This would be decidedly more in keeping with the character of your furnishings, for the parlor at least, as I note the furniture is of French design. Therefore, for this room we send a sample of an apricot-colored paper showing a formal design of medallions and baskets of flowers. With this, white enamel for your woodwork will look well. The ceiling should show the same tone of ivory as the woodwork. In selecting the drapery material the color would be largely influenced by the shades shown in your tapestry furniture covering. Some one of the predominating colors should be repeated in the door curtains and in the over-draperies at the windows. The material for the latter might be of brocade or damask. These curtains should have a suggested valance and be finished with a gimp or moss fringe.

For the hall we are sending a dull blue tint and for the living-room a soft shade of tan, to be used as a tint. The same ceiling color as advised for the parlor could extend throughout. For the upper third of the wall in the dining-room we again advise a paper. The one I have selected shows a soft mingling of dull blue, olive green, wood brown, and gray, in tapestry foliage design. The lower wall could be tinted the shade of dull blue shown in the sample attached. For curtains next the glass of the window we recommend net like the sample sent; this is 40 inches in width, $1.15 a yard. It makes very attractive diaphanous curtains. For the over-draperies the thin blue crinkled silk is suggested. This silk is 30 inches wide, 90 cents a yard. The curtains should be finished with a narrow moss fringe in the same color and extend to the sill line. Door curtains of dull blue cotton velvet, 50 inches wide, $2.55 a yard, would complete the scheme. The linen taffeta, the background of which matches the tan tint suggested for the walls, is advised for the over-draperies in the living-room. The design on this material you will note repeats the various colorings shown in the tapestry paper suggested for the dining-room adjoining.

Where the opening of the door between kitchen and dining-room discloses too much of the former, a screen is of great value

Your floors throughout should be given a light brown stain and finished with three coats of the best floor varnish, the last coat to be lightly rubbed with pumice and oil. This will reduce the high polish and give an effect closely resembling wax, though it has not the drawbacks of the latter, as it does not spot with water, does not require frequent renewal and polishing, and can be wiped up with a damp cloth.

For the bedroom of northern exposure a soft yellow tint is sent. I would suggest with this a paper ribbon border in a slightly different tone of yellow from the side walls, interspersed with occasional clusters of lilies of the valley. This border should outline each corner and be set below the picture rail and above the baseboard and will give a very decorative and attractive effect. White muslin draperies used next the glass, with over-draperies of white dimity bordered with a cut-out appliqué of yellow ribbon design are advised.

For the bedroom of southern exposure a light shade of pastel green is sent for the walls; with this you might use the same white muslin curtains at the windows and over-draperies of floral cretonne showing pink roses and green leaves on a white ground.

For the two remaining bedrooms delicate old rose is chosen for the walls of one, and pale gray with an underlying tone of pink is recommended for the other, with appropriate cretonne, linen taffeta, chintz, or art-ticking draperies over white muslin next the glass.

Inexpensive Rugs

THE complaint of a correspondent regarding the designs and colors of the inexpensive rugs found in the shops to-day and put out upon what she terms "a helpless and unoffending public" appears to us in a measure justified, and in publishing the following excerpt we feel

There is no form of floor covering better suited to the purely Colonial type of room and furniture than rag rugs

sure it will find an echo in the hearts of many women who have endeavored to find a good floor covering for little money.

"It seems to me in this day of appreciation of color and general harmony in house decoration that the manufacturers of the inexpensive rug have been unwise—not to say unkind—in the fearful combination of color, design and textile they offer us to put upon the floors of our simple homes. The term simple can certainly in no wise apply to the rugs themselves. Can anyone tell me the reason for introducing in the rag rug of our grandmothers an Indian Navajo design, or why in the same simple, unpretending, but artistic material we sometimes find ships at sea, or cottages set among wooly trees as decorative borders? While we may have escaped to some extent from the cabbage rose of lurid colors, and the faithful house dog on the rug of the Velvet and Brussels carpet put out thirty or forty years ago, it is a question to my mind whether we are really better off. I enclose a self-addressed envelope and ask if HOUSE AND GARDEN will recommend to me some manufacturers who do make floor coverings which are inexpensive and also inoffensive."

We are pleased to send the troubled lady such addresses as we feel will be of service to her. There are fortunately some excellent rugs which are low in price, but we have realized that these must be looked for. The least expensive rugs of this kind are of Chinese matting and show excellent colors and attractive designs. The Kobe rug also shows a good weave and should be durable. These come in very pleasing neutral tones and unobtrusive borders. In the size 9 x 12 ft. the price is $10. Somewhat more expensive are the Bungalow rugs, which are made of wool and reversible, showing plain effects in two or three tones of the same color. A particularly attractive range of colors and shades is offered in these. Again the Body Brussels rug is made in some small and pleasing all-over designs of good color.

Of the conditions which produce and put on the market the impossible effects in floor coverings to which the writer refers, the manufacturer will say that these products are put out to meet the public's demand, and the public, of which our correspondent is but one, expresses itself variously, some objecting strenuously—as in this case—but the greater part accepting the inevitable and trying to live down the obtrusive floor coverings as best they may; while others will contend that only in such effects can they secure the "cozy" appearance they demand for their homes. Nevertheless, we are on the right road to better things; slowly but most surely they are being demanded and supplied.

Screens and their Uses

WILL HOUSE & GARDEN be kind enough to give me some specific information in regard to screens? I have domestic problems which I feel can be successfully solved by the use of screens—if I can find something suitable.

First: The door leading into the kitchen opens directly from my dining-room into this department, allowing an unobstructed view from the table, which is not desirable. The rooms under consideration are in an apartment house. The dining-room has dark woodwork, oak, and above the wainscot the walls are yellow. The furniture is also of oak. Could I use a screen near the door? In the same apartment a bedroom opens directly at the end of the hall, and this hall depends for its lighting on the windows of this room, except when artificially lighted. Would a screen placed in the doorway be awkward or objectionable? The room has paper in two tones of gray, with draperies, etc., of gayly figured chintz.

A floor covering in one or two tones would have helped greatly in lessening the distracting character of this room

The screen for your dining-room would certainly successfully solve the difficulty of the door leading into the kitchen. The three-fold screen can easily be placed in such a way as entirely to cut off the view into the kitchen and yet leave a passageway. There are screens made of wood (light in weight) which are stained to dark oak colors. Some of these show a stencil or burnt-in decoration in color of conventional design for the upper panels. Such a screen for your room wrought out in rich green and yellow on the dark wood would be effective. The screen should stand almost if not quite as high as the wainscot. A screen of this kind may be purchased for $10 or $12. If something less expensive is desired there are three-fold screens in which the panels are covered with burlap in good shades, the frames of darkly stained oak. The upper section of the screen shows an effect of paneling. Such a screen costs from $4.50 to $6.

For your bedroom door we would not advise a screen as it would be found awkward for entrance and exit. Curtains would better serve your purpose. You fail to mention the color of the hall walls, but we would recommend that you select a fabric of sufficient weight to hang well,

(*Continued on page* xxv)

Reproductions of Oriental rug patterns that are good both in color and design are now made by American manufacturers

Garden Suggestions and Queries

Edited By Gardner Teall

The Editor will be glad to answer in these columns subscriber's queries of general interest pertaining to individual problems connected with the garden and grounds. When a direct personal reply is desired, please enclose a self-addressed stamped envelope.

April

THIS is the traditional month of showers, when thirsty Earth drinks her lasting fill against the time of later droughts, much as the camel lays up his seven days' supply of water against the desert journey. If we plant carefully and generously now, June will bring many an oasis into our garden's present barrenness, and pledge fruitfulness to Autumn. Everyone who has even only a tiny patch of ground should prepare now to plant every square foot of it, that it may hereafter lend beauty to house and garden.

April's Reminder

Look to the matter of this month's spraying, and do not neglect any part of your garden.

You will need to divide roots of your perennials in the hardy border this month.

April showers will be starting the landscape into such loveliness as this

This is a good time to build a birdhouse, for birds are friends to your garden oftener than enemies. But for them many of your plants would be killed by the insects the birds destroy.

This is the month for planting deciduous trees, shrubs and vines, fruit and nut trees (especially dwarf varieties) and small-fruit bushes.

Fertilize asparagus bed and rhubarb patch with nitrate of soda.

Prune grape-vines and fruit trees, but not small-fruit bushes.

Examine your shade trees and if you find any cavities of decay in their trunks clean these out and fill up with cement.

Set out Standard Box and Box-edging early. Where Box-edging has been set out the year before, it can be pruned somewhat before growth begins in April. All varieties of hedges may be set out this month.

You can plant all evergreens this month.

Remove winter mulching from your strawberry bed.

Tender roses may be pruned late in the month; also spray them with whale-oil soap.

Have your coldframes ready for transferring to them tender vegetables and flowers from the hotbed for hardening by the middle of the month.

If you sow seeds of perennial flower now in coldframes they will bloom their first year.

Plough or spade the garden as soon as the surplus moisture from departing frosts is out of the ground.

Love-in-a-mist is one of the fairest border flowers

Spray seedling hollyhocks with Bordeaux mixture.

Sow Sweet Peas as soon as the ground can be worked, and also Love-in-a-Mist (*Nigella Damascena*) for the garden border.

Start your Cannas in the hotbed.

Prepare labels for the seeds you will be planting.

Look over your garden tools and see that they are all in good condition, and sharpen those which need it.

Maidenhair as a House Plant

THE graceful feathery fronds of the Maidenhair ferns always excite interest. The most beautiful one, *Adiantum Farleyense*, often seen in the florists' shops, cannot be grown in the window garden, but there is a good substitute for it in the so-called "hardy Farleyense" (*Adiantum Capillus-Veneris* var. *imbricatum*). This will withstand the trying conditions of the house just as well as will the Boston fern. I know plants

The hardy Farleyense Maidenhair is a delicate house-fern worth cultivating

which have lived all winter in a New York City residence, a severe test for any plant, fern or not.

If the soil in which Maidenhair ferns are growing ever becomes dry, the fronds immediately wither and nothing can be done to recuperate them. Should such an accident happen, remove the injured fronds and keep the plant in as good a condition as possible until the following spring, when new growth will be made.

Window Light

WE have just moved into a three-story house and as there are large bay windows on the southern and western sides of the house we are anxious to try our luck at window-gardening. Which of the windows should we choose? We wish to confine our house-plants to one room.

The southern window is an ideal position, although you should anticipate the glare of even winter's mid-day suns by planning for adjustable shades. Although an abundance of light is necessary to success with most house-plants, the mid-day sun may prove too strong for "resting" plants. Palms and ferns will require such protection when the sun is high in the heavens.

The English Daisy

WILL you please recommend some bedding plant for April and May that will be profuse in flower and prove effective in two border beds in which, later, I can set out something else? We usually have an early, mild spring. When and how should seed be sown?

The English Daisy (*Bellis perennis*), a hardy perennial, should fill your requirements well. These profusely blooming little plants send forth thousands of pink and white rosettes, and with the Pansy they share the honors of being about the best bedding plants from the latter part of April through May. After that you can lift them and naturalize them elsewhere. They thrive best in a rich, moist, partly shaded soil. Sow the seed early in the hotbed, or indoors, and transplant. The Longfellow is a particularly beautiful rose-colored variety, and the Snowball a white one. When sown in open ground May is the proper planting time. If left to themselves your English Daisies will need more or less thinning out from season to season, as they spread perseveringly when once they have found a growing spot that they take a fancy to.

Ratio of Fertilizer Elements

WILL you kindly tell me something about the proportion of elements necessary in high grade fertilizers?

See Mr. Crocker's article on Garden Fertilizers in House & Garden for February, 1910, page xii. High grade fertilizers have of nitrogen from 10 to 40 per cent, of potash from 14 to 50 per cent, and about 20 per cent of phosphoric acid. A good fertilizer, lasting in effect about the following ratio: nitrogen 2; potash 5; phosphoric acid 4, modified as the condition of the soil requires it. It bears repeating to urge the gardener to study the individual problem before him. If he is not sure of his soil he cannot do better than to send a sample of it to one of the Agricultural Experiment Stations in his state. Expert advice will then be given him, and he will have no need of guessing himself out of his difficulty.

The Child's Garden

DON'T forget to teach your children the delights of gardening by planning for them and showing them how to plant little gardens for themselves full of interesting things, not the plants you alone fancy but plants that will entertain and interest them. At first the plot should not be so large that the little fingers will tire in keeping it in order, for a wee gardener should have a wee garden that is not beyond his strength.

Nothing can be more effective for a wall border than a bed of Anemones

Anemones for Wall Borders

A LONG, flat, gray stone wall divides part of our garden from a corner of the tennis court, and I would like your suggestions as to what I could plant as a border along it that would be hardy and come up again. Something effective that would blossom into the fall, for we stay late in the country.

You could not have a better plant than the hardy perennial Anemone (*A. Japonica*), especially the beautiful, semi-double Queen Charlotte variety which has the pink of a La France Rose. This, with the beautiful green of its stem and leaves, will produce an exquisite color harmony against the gray wall. It blossoms from August through September. Mixed with the *A. Japonica*, var. *alba*, the pure white of the latter lends desirable contrast. *A. sylvestris*, thoroughly hardy and of tall growth, flowers from spring to July. *A. coronaria*, var. *St. Brigid*, is the best variety for April bloom.

Everyone knows and loves the English Daisy

As an Edging Plant the English Daisy has an exquisite charm of its own

The Why and How of Pruning

The purpose of this page is to set forth in the most direct, non-technical form the fundamental principles of amateur gardening. Unlike the great mass of garden literature, it presupposes no knowledge of the subject, aiming to satisfy those who now for the first time want to know how to make things grow. The Editor will welcome any questions from beginners and will print in these columns the experience of contributors when they seem to have a wide appeal.

NOWHERE is the struggle for existence keener and fiercer than in the vegetable kingdom. Thousands of seedlings sprout for every one that reaches maturity, and everywhere along the way from root to branch and fruit, there is the same lavish extravagance in Nature to keep the balance up.

This is the chief reason for pruning, broadly speaking; the principle of it is always to relieve the plant by reducing this struggle. For of course when its best efforts are constantly strained to the utmost in just keeping alive, it cannot produce flowers or fruit in abundance nor of very high quality. And when there are too many branches, or many that are old and weak, it amounts practically to the same thing. None can be as strong and leafy as they should when all are insufficiently nourished; so it is virtually a struggle for life between them constantly. A little pruning every year is like the stitch in time—and the destruction of an ambitious shoot as soon as it starts is far easier on the tree and the gardener too, than the laborious task of sawing through a good sized limb after it has had time to mature.

In the first place there are two things about *form* to remember in pruning: one, applying to trees, especially, is that leading branches must never be allowed to spring from the same point on the trunk—or from *opposite* the same point, is perhaps clearer—while the other, applicable to every sort of plant—is that, generally speaking, the outer shoots or branches should be left and the inner ones cut away.

In the first instance the tree is weakened structurally and will split more readily under stress of wind or ice—or fruit—when its branches diverge at just the same level, forming a sharp crotch or Y; in the second, a plant becomes choked and top heavy if inner growth is constantly encouraged, and the branches suffer injury from rubbing against each other. So much for form.

Next in importance, to be always remembered and considered when there is any clipping to be done, is the fact that every tree or shrub or vine has its own little personal peculiarity about flowers and the manner of producing them—and produces them usually *only* on wood of a certain age—sometimes one year, sometimes two, and sometimes more yet. So it is always necessary to know the peculiarity of any plant in question in this respect before venturing to lop off a branch, else an entire season's product may be literally nipped in the bud.

Of fruit trees the apple and pear bear on "spurs" of old wood that may be anywhere along the branches, but peaches are always borne on wood of the previous season's growth. Trimming off the annual shoots will therefore sacrifice the fruit of the latter but not of the former; while "heading in"—that is, removing the ends of the branches with their growing terminal buds, being a process that encourages the growth of lateral buds—that are waiting for just this to happen—into shoots or young branches, of course increases the amount of new, therefore of fruit producing, wood. See the *Beginner's Garden* for March, where the matter is more elaborately explained.

Of flowering shrubs, the lilac and the hydrangea afford much the same contrast as the apple and peach among fruit trees. Hydrangeas bloom on wood of the season's growth, lilac on wood of the previous season. The former may therefore be pruned very early in the spring without danger of destroying the blossoms, but the latter should only be gone over with the knife immediately after flowering. This gives them the chance to grow branches for the next season and to stow them with flower buds before frost interferes.

It is of course out of the question in this limited space to name a very complete list of trees and shrubs, with their peculiarities in regard to bloom, but some of the most commonly planted are included below—and questions will be most willingly answered by mail if the one plant that puzzles any reader is omitted.

TREE FRUITS

Apple: Fruit borne on old spurs; prune in winter or spring.

Pear: Fruit borne on old spurs; prune sparingly in spring.

Plum: Fruit mostly on spurs but in some varieties on both spurs and annual growth; prune after harvest.

Cherry: Similar to plum; prune in spring or after harvest.

Peach: Fruit borne near base of previous year's shoots; prune after harvest.

SMALL FRUITS

Blackberry: Fruit borne on canes of previous season's growth; cut old canes out after fruiting; cut young canes back as soon as 2 ft. high; cut laterals on these sparingly at tips in spring, or not at all.

Raspberry: Same as blackberry; spring pruning is only to thin the fruit; a cutting out should be done the previous season.

Currant: Fruit borne on both old and young wood; the best on base of 1-year shoots springing from 1-year spurs; have no wood over three years old.

Grapes: Borne on wood of present season *which rises from wood of previous season;* fall or winter pruning is best.

FLOWERING SHRUBS

Roses: Flowers borne on new wood; prune out old wood and weak shoots after flowering, or cut back before sap starts in spring from ½ to ⅘ of bush.

Forsythia: Flowers borne on old wood; prune immediately after flowering.

Hibiscus (Rose of Sharon): On the season's shoot; prune in fall or *early* spring.

Hydrangea: Borne on the season's shoots; prune in fall or *early* spring.

Lonicera (Honeysuckle): Usually on season's shoots; safest to prune immediately after flowering however as some bloom very early.

Philadelphus (Syringa): Borne on old wood; prune immediately after flowering.

Spiraea: On old wood; prune sparingly after flowering.

Syringa (Lilac); On last year's wood; prune immediately after flowering.

Viburnum: On old wood; prune after flowering.

Diervilla: On old wood, prune after flowering.

(*Continued on page* xxiv)

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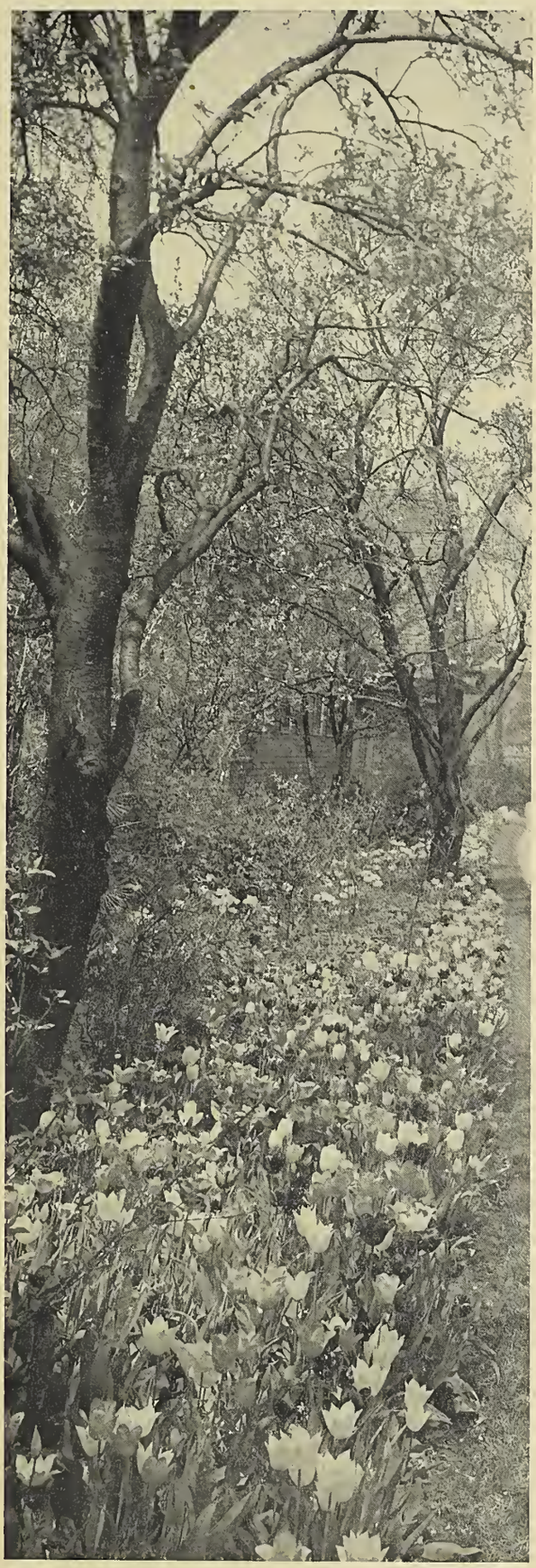

Contents, May, 1910

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CASA DEL PONTE, AN ITALIAN HOUSE AT TOKENEKE, CONNECTICUT

The summer home of two New York bachelors that was built very economically of cement by day labor. Slee & Bryson, architects

House & Garden

VOLUME XVII May, 1910 NUMBER 5

An Italian adaptation in Cedarhurst, L. I. Color is employed in the frieze by using mineral colors in a cement wash applied through a stencil. Louis Boynton, architect

Italian Adaptations for American Homes

BY LOUIS BOYNTON

Photographs by Julian Buckly and others

[*The problem of choosing an architectural style for the American country or suburban home is one of the most puzzling that confronts the home-builder. In order to bring about a better understanding of the more common types and with the idea of clarifying, as far as possible, this whole matter, we have asked a number of prominent architects to present each the case for one particular style. In the December issue Mr. Frank E. Wallis, the well known authority on Colonial architecture, told why a house of that type is the only one to build. Mr. Allen W. Jackson presented in the January issue the case for the Half-timber house. In February Mr. Aymar Embury, II., added his convincing argument for the picturesque Dutch Colonial. Mr. J. Lovell Little, Jr., told the merits of English Plaster houses in March. A number of other styles will be explained and illustrated in future issues. The Editors will gladly do all in their power to answer any questions regarding style, details or construction.*]

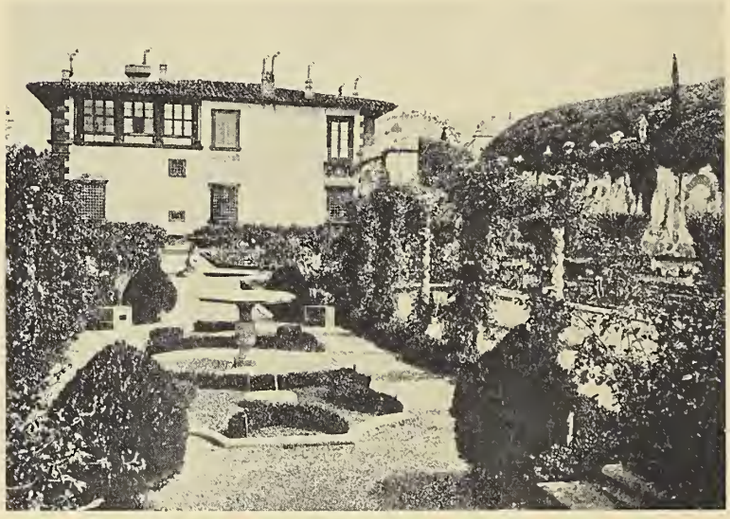
LET us begin by frankly admitting that the style employed in the design of a house should be determined by the special conditions of environment, by the material used, and by the social and intellectual characteristics of the people who are to occupy it.

For instance, it is often appropriate to build a camp in Maine or in the Adirondacks of logs, and in its place this seems the most fitting material and properly influences the "style" or character of the building. However, while one may admit this, it would not make a structure built of this material with its resultant "style" seem especially appropriate or fitting on, say, Fifth Avenue, New York. It is difficult to imagine an architect who really designs his buildings saying, "Go to, let us now design a building in Tudor Gothic or Dutch Colonial," without having first studied his problem. No; a design should grow from the conditions imposed by the site, the material to be used and the needs of the owner and his family, and the style should be determined, almost automatically, by these requirements.

Granting all this, there are still valid reasons why an adaptation of the Italian Renaissance is the logical style to use in an increasingly large number of cases. Undoubtedly all good design is the result of a frank use of the materials employed; and any forcing of the materials is sure to result either in a distorted design, or in what, I think, may fairly be called "building scenery," that is to say, in constructing an effect that looks like something different from what it is.

For instance, building in frame with a covering of stucco is,

Mark Twain's home, "Stormfield," at Redding Ridge, Conn., is an excellent example of Italian motives applied to American needs. Howells & Stokes, architects



A large part of the charm evident in the smaller Italian villas is due to a well considered lack of stiff symmetry

An American adaptation that shows the distinctively Italian loggia treatment for an interior courtyard. Charles A. Platt, architect

to my mind, distinctly disingenuous. Stucco represents the idea of plaster on a backing of some form of masonry—stone, brick, terra cotta, or what not, but never a cover for a wood frame.

Now, there is one question which has to be considered in building, and consequently in designing, every house; and that is the question of materials. "Of what shall we build our house?" is a question that has to be settled first of all for every case. Frequently there are only two or three materials that are to be had, without undue expense, and usually the materials of the locality are the ones to use. Rightly used, they will generally give results which seem harmonious and fitting.

Of course, in this country the tradition is to build as much as possible of wood. Formerly wood was the cheapest as well as the quickest material to use, and the idea that wood is cheap is so firmly ingrained that most people are surprised to learn how little basis there is at the present time for this belief.

For some years there has been a well marked and increasing tendency among owners and architects to try to find some substitute for frame construction. This is partly to be explained by the constant advance in the price of lumber and the fact that the difference in the expense of building in wood and some incombustible material is rapidly reaching the vanishing point; and partly by the growing conviction that the risks of fire in a wooden house are too great. People are realizing more and more fully that the extra expense of building either fireproof houses, or houses where the walls at least will resist fire, is more than justified by the added security obtained. Furthermore, the reduced cost of maintenance in buildings that do not require frequent painting is a factor that appeals more and more strongly to prospective builders, especially if they have had experience with the constant drain for repairs brought about in even a well built frame house.

Now, undoubtedly, the most economical and straightforward way of building in fireproof or semi-fireproof construction is to use straight simple wall surfaces with the minimum of breaks, and to stop the wall at an even height.

If the top of the walls are protected from the action of the weather by a projection of the roof, you have the maximum of efficiency with the minimum of effort and expense. These conditions naturally suggest the sort of building so prevalent in central Italy and especially in Florence.

In other words, they suggest the Italian type of building, with its plain, simple wall surfaces, its long, hori-

In the living-room of Casa del Ponte (see frontispiece). Slee & Bryson, architects

zontal projecting cornice or eaves, and the simple roofs which are so characteristic of the type.

It may be said, and with some truth, that the Georgian or Southern Colonial type fulfills these requirements equally well. This may be true in some cases, but, as has been frequently pointed out, the almost entire lack of flexibility in the Colonial style makes it often difficult to use without forcing a plan into a more or less arbitrary rectangle, and in so doing distorting the natural requirements of the house.

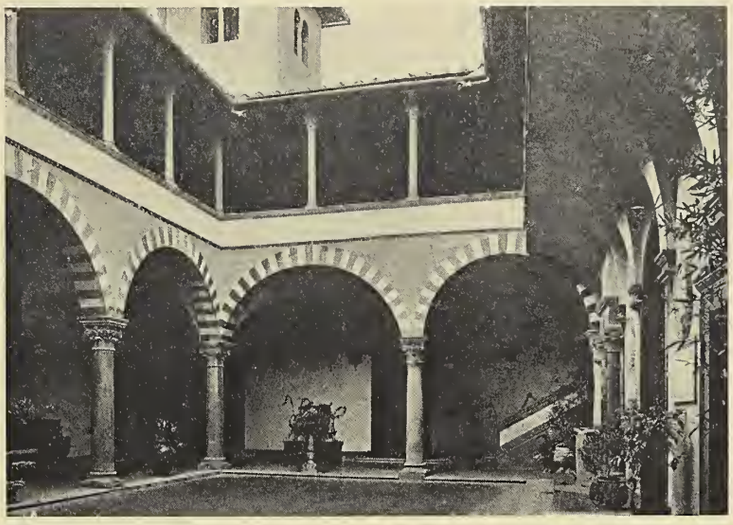
Now, unlike the other renaissance styles, and contrary to the usual impression, the Italian work, except in the later and more formal examples, is one of the freest, most flexible styles ever developed. Even the most cursory inspection of any of the well known works on Italian villas will convince the doubter of the absolute accuracy of this statement.

During a somewhat prolonged stay in Italy, the present writer made a practice of measuring and making drawings of the most important, or at least the most interesting, buildings and details that came under his observation; and it happened, not once, but so many times that it came to be almost a commonplace, that some unexpected departure from the normal, some unperceived variation from symmetry perhaps, made a second visit necessary to check the measurements. This almost invariably resulted in uncovering some perfectly frank lack of balance which had been perpetrated in so naïve a way as to elude the eye of even a trained observer.

One came to feel, after a while, that there was no such thing as absolute symmetry in Italian work, and I firmly believe that a large part of the interest in this work is due to that fact. That this subtle lack of obvious balance accounts in some measure for the strange compelling charm of the style seems no more than a reasonable deduction.

But it is in the Italian villas, which correspond most nearly to our country houses, that one sees this quality carried to an extreme that seems almost incredible. The general mass of the houses is so simple and the effect so regular that the mind scarcely grasps the fact that the windows are put in where needed for use, and without any thought of absolute symmetry, but with a wonderfully subtle sense of balance; so that the effect of a rectangular facade, with a strong shadow from long horizontal projecting eaves, is of a well balanced sym-

In the Cedarhurst house shown on page 169 the view over the trees is obtained from a loggia on the third floor level



The Villa Bondi, Florence, might well furnish a precedent for enclosed courts in American country homes

Nothing can approach the Italian style in a setting of cedars such as that found at Casa del Ponte

The Italian style may be well expressed in the frank use of plain cement blocks as used in this fireproof country home. Lord & Hewlett, architects

The Villa Bleu, Garden City, L. I., is of cream-color stucco with blue roof and blinds. Albro & Lindeberg, architects

Villa Castello, one of two small palaces owned by the Royal House of Italy, illustrates the charm of subtle asymmetry in the openings

metrical whole—an effect difficult to obtain in any other style. Of course objection is made that this is not an "indigenous style." My own impression is that except for the Pueblos and the cliff-dwellers the only "indigenous style" is the wigwam, but I do not feel myself entirely limited to this precedent.

The fact is that our modern conditions, both material and intellectual, are so far removed from even the colonial farmer that their kind of house does not fit, at least not without such serious modification as to destroy its entity. Whereas the architecture of the Italian Renaissance is the result of an activity, both intellectual and material, which is measurably reproduced in our present conditions. And the indications are very strong that we are entering on a period of esthetic renaissance which has a very vital impulse.

Both on the score of practical economy, therefore, of adaptability to the materials, and as representing the intellectual and esthetic status of the present generation, the Italian Renaissance seems the most reasonable starting point from which to develop our domestic architecture, especially as regards country house work.

Of course, it does not need saying that the fact that this Italian style is not necessarily formal and symmetrical, does not make it any the less well adapted to the most formal and precise type of building.

While this type of house may be executed with equal propriety in stone, marble, brick, or concrete blocks, it is peculiarly adapted to a stucco treatment. In fact a very large proportion of the buildings in Italy, even among the finest examples, are built of stucco on a rubble stone wall. The writer well recalls passing a Florentine palace near the Riccardi in the company of an educated Italian. Something was said about the building being of plaster and, surprise being expressed, my companion, with the utmost *sang froid*, took the end of his umbrella and broke off a good-sized piece from what looked like a heavily rusticated stone. This, however, should not be taken as an indorsement of the vicious practice of imitating stone in stucco. There is no worse crime in the somewhat extended repertoire of an architect than this same lack of frankness.

Italian adaptations give the most appropriate setting for the most perfectly developed type of formal garden design Charles A. Platt, architect

As a rule, a stucco house, unrelieved by decoration or ornament, has a cold and rather uninviting look, and it is, I believe, for this reason that half-timber work has been so often tried, unfortunately with almost uniform lack of success. Now it is quite possible to use exterior color decoration on stucco if it is done discreetly and with good judgment.

By using simple designs and quiet low-toned color, the monotony of the plaster wall may be relieved. This method of decoration is, of course, not uncommon in the north of Italy and is found even as far south as Florence, and may be perfectly well adapted to the conditions of our modern design.

The W. D. Guthrie home at Locust Valley, L. I.—C. P. H. Gilbert, architect—is lighted by three hundred electric lights operated by a thirty-horsepower gas engine

Lighting the Country Home

CONVENIENT AND TRUSTWORTHY SYSTEMS FOR LIGHTING THE COUNTRY PLACE THROUGH AN INDEPENDENT PLANT GENERATING ACETYLENE, ELECTRICITY OR GASOLINE VAPOR

BY T. E. WHITTLESEY

NOT many years ago a great draw-back to country living lay in the fact that it was necessary to put up with the nuisance and disagreeable odor of kerosene lamps. To-day one can build a country home with no fear whatever of trouble on the score of proper lighting. There are numerous systems, all having their enthusiastic advocates, any one of which will do the work that is required of it.

In selecting a system there are several important considerations to be kept in mind. In the first place, the cost of installation must not be given too much weight. The initial cost of installing a thoroughly reliable generator will be distributed over many years, and if one makes his selection solely for the reason that a plant is cheap he may be disappointed in a very short time to discover that it must be torn out to make way for a new one.

The cost of maintenance, of course, includes the fuel that is used, the repairs to machinery, and the labor involved in caring for the plant. With the use of electricity, also, it must be remembered that the lamps will have to be bought from time to time—a comparatively small item.

In a case of a country place where not only a lighting problem must be solved but an adequate supply of water must be provided for daily use and for fire protection, it would probably be well to install electricity, for the reason that the same engine used for producing current through the dynamo would be coupled up to a pump for a part of the day and both of these problems solved more economically in that way.

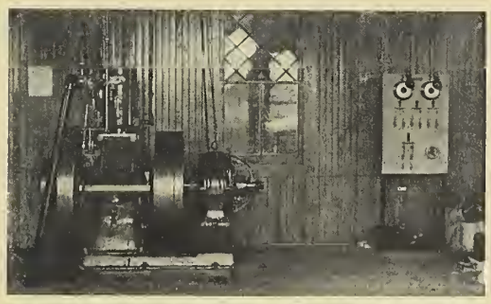
ACETYLENE GAS

Acetylene gas is coming to be more widely and favorably known through its use in automobile head-lights as well as for lighting the isolated country home. It has the distinction of being the whitest illuminant in general use, more nearly approximating sunlight. The gas is made from calcium carbide, a product resembling in color crushed granite and made by melting together in an electric furnace ordinary lime and coke. Until brought into contact with water the carbide is non-combustible and actionless.

An acetylene generator takes the place of the ordinary gas meter that would be had in districts supplied with common illuminating gas through street mains. In this generator the carbide and the water are brought into contact to produce acetylene gas. In some forms the carbide is dropped into the water, in others the water drips upon a pile of carbide, but in all types there are three parts to the generator—the carbide receptacle, the water tank and the gas tank. And in each type there is an automatic device for bringing the carbide and the water together just fast enough to make the needed amount of gas.

From the generator, which is usually set in the basement, wrought iron pipes lead the gas to the various rooms, and the gas is delivered through a special form of burner which consumes about one-half cubic foot per hour—about one-tenth the amount burned at a common illuminating gas outlet.

Calcium carbide costs, delivered, about $4 per 100 lbs., and this amount should make from 400 to 500 cubic feet of gas. A generator of reliable make, with piping, brass fixtures, globes and burners for 35 lights, costs from $200 up, and the cost of producing a 24-candlepower light—the equivalent of one and a half ordinary 16-candlepower electric lamps—is about four-tenths of a cent per hour. West of the Rocky Mountains the increased freight charges on the carbide bring the cost up about 25 per cent.



A five-horsepower, three kilowatt direct connected gasoline engine and dynamo, with switchboard, suitable for a moderate-size house

ELECTRICITY

There is no doubt that electricity has a strong hold upon popular favor for lighting purposes. Where a public service supply is not obtainable a plant may be installed in the cellar, stable or outhouse. It consists of a dynamo, a switchboard and some form of engine to run the former.

A combination consisting of dynamo, gasoline engine, switchboard and all equipment except wiring and installation,

(*Continued on page* xxvi)

In the rose garden of to-day we are not satisfied with the old-fashioned bedding plants; we must have a two-story display by training half the bushes on high stakes

Roses for the Small Place

CHOOSING THE MOST SATISFACTORY ROSES TO THRIVE IN VARIOUS LOCATIONS—BEDDING, CREEPING, ARCH AND HEDGE TYPES IN RELIABLE VARIETIES AND COLORS

BY HUGO ERICHSEN

Photographs by the J. H. McFarland Co. and Nathan R. Graves

OF all the children of Flora, none is more accommodating nor can be used in so many different ways as the Rose—rightly it has been termed a plant of many parts. You may cover walls, fences, porches, pillars, poles, arches, arbors, and even make hedges with the Rose while you cannot fill bed or border with any more lovely flower.

Unfortunately the purpose for which Roses are intended does not always receive due consideration at the time they are purchased. Too frequently are these queens of flowers selected because some friend has given a chance recommendation of some varieties which may not fit the place another has for them at all, or because the buyer was beguiled into their acquisition by some of the garish pictures with which occasional irresponsible dealers are wont to hypnotize their victims, instead of buying from responsible nurserymen and florists, or because a lot of "standard" roses are offered by someone at a phenomenally low price which seems to indicate a bargain, though in reality they are worthless old stock being got rid of. In all three respects I write from experience. Buying roses without careful thought of the matter or when purchasing at emporiums whose regular business is other than that of dealing in plants is very much like a game of chance. Now and then at rare intervals I have scored, as when I acquired a rose under the name of Prince Bismarck that turned out to be a magnificent Frau Karl Druschki; but more often I have failed lamentably, and plants purchased under the grandiloquent name of "American Beauty" had to be discarded from my garden because of the insignificant flowers they put forth. They scarcely bloomed at all with all the painstaking care given them.

The half-evergreen Memorial Rose (*Rosa Wichuraiana*) makes a beautiful cover for banks or stone walls

For this reason it is imperative that the beginner in rose-culture should limit his patronage exclusively to dealers who may be depended upon to give him a square deal, who will not resort to misrepresentation, and who will provide him with plants that are really worth growing and which will bear transplanting. Fortunately there are many such throughout the United States and so the beginner need have no discouragement in the matter of obtaining good plants if he will go about it sensibly.

Lady Gay, a pink rambler, and Paradise, a beautiful single pink-and-white climbing rose with imbricated petals

At this point we are confronted by the old question whether preference should be given to a Rose grown upon its own roots or to a budded specimen. Personally I should pronounce in favor of the latter, not only on the score of economy, but also because I have found the results in my own experience to be quite as favorable, when care has been taken, as it should be, to exclude any shoots that may sprout from the roots.

In the matter of varieties, the embryo rosarian has a wide choice. But at first, I believe, it would be advisable for him to confine himself to Roses known to be floriferous and of strong growth. To mark the progress of a vigorous climbing rose, such as the Dorothy Perkins, is one of the joys of even the smallest garden.

With reference to the purpose for which they are selected Roses may be divided into Bedding, Creeping, Arch and Hedge varieties

The list of Bedding Roses is of course especially large and includes such garden favorites as the Magna Charta, Mrs. John Laing, General Jacqueminot, Ulrich Brunner, Clothilde Soupert, Maman Cochet, La France, Catherine Mermet, Clio, Anne de Diesbach. Prince Camille de Rohan, Paul Neyron and the Francesca Kruger. Among the newer Roses in this respect I would recommend the white and pink Killarneys, Mrs. Sharman-Crawford (pink), the Lyon Rose (chrome yellow), Reliance (pink), Dr. O'Donel Brown (carmine) and the snow-white Molly Sharman-Crawford. Of Frau Karl Druschki (white) I have already spoken. In my own limited collection this Rose and the pink Killarney have made the best showing and have combined a free-flowering habit with vigorous growth. Most of the new Roses mentioned are Hybrid Teas, which are becoming more and more popular every year and have proven just as hardy in most parts of the country as the Hybrid Perpetuals.

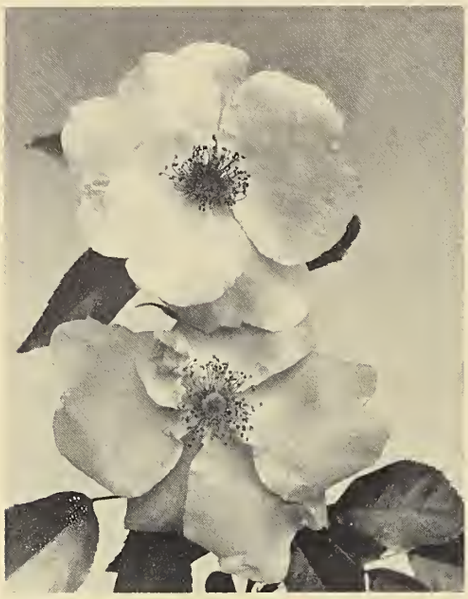
Among the Roses that may be interspersed with shrubbery or planted in groups to advantage the two, in my opinion, most worthy of mention are the Madame Plantier (white) and Harrison's Yellow. Both of these are commonly known as Bush Roses, a term that is indicative of their habit of growth, and should not be selected for producing flowers for cutting.

Among the Creeping Roses I would call particular attention to the hybrids of Rosa Wichuraiana, also known as the Memorial Rose, Universal Favorite, Manda's Triumph, Gardenia, South Orange Perfection and Pink Roamer. These roses are valuable

Marechal Neil, a tender climbing Tea Rose, dark golden-yellow in color. Requires winter protection in the North

Gloire de Dijon, a creamy-amber pillar rose, perfectly hardy south of Washington, D. C., but thriving with careful protection in the North

Killarney, the comparatively new Hybrid Tea Rose, having a beautiful shell-pink color, has achieved a wide popularity



The Anemone Rose, a hybrid of *R. Sinica* and a Tea Rose, has large light pink flowers

The Yellow Rambler, a fragrant cousin of the well known Crimson Rambler, blooming for three weeks

Hiawatha, a hardy climber. The petals are ruby-crimson, the center white and the anthers yellow

for covering waste ground, stumps of trees, pillars, posts, trellises, rocky slopes, gravelly embankments, and will flourish where other roses could not possibly live. They are very floriferous and delightfully fragrant.

Roses adapted to arches are also useful for training over porches, pillars, or trellises, and will do well wherever they can have support. Among the old hardy Climbing Roses that are widely known in this connection are the time-honored favorites—the Baltimore Belle, Prairie Queen, Pride of Washington and the Tennessee Belle, but no Rose was ever more highly esteemed for this purpose than the Crimson Rambler, although rosarians justly consider the Dorothy Perkins as much superior, for its flowers are much more beautiful, being of a dainty shell-pink color and they last a very long time. But when our friend the rose-grower asserts that they do not fade, I am constrained from my own experience to disagree. However, as the Crimson Rambler does the same thing I do not see that it makes any difference. Tausendschön, a comparatively recent introduction among the hardy climbers, is a beautiful novelty of the Crimson Rambler type. It blooms from the first of June until the beginning of August. The flowers are about the size of Clothilde Soupert, soft pink, changing to rosy carmine. The foliage is very handsome and not subject to disease or attacks by insects.

Even if you have not the time to care properly for a whole rose garden, have at least a few of the hardy climbers to arch a path or cover a wall

Among the Hedge Roses, we need only consider the Japanese Rosa Rugosa and its hybrids. They combine hardiness with freedom from disease, and elegance of foliage with beauty of fruit. They make impenetrable hedges, splendid screens, and for single specimens, clumps, and cemetery decoration have no equals. The colors of these Roses are red, white, and pink.

If large flowers are desired the tyro rosarian's choice should fall upon the Paul Neyron, Ulrich Brunner, Frau Karl Druschki, Mrs. John Laing, and the La France, whereas the reverse may be obtained by means of the aptly-named Miniature, and the Gruss an Teplitz. The latter is also sometimes marketed under the name of the Virginia R. Coxe.

A CLASSIFICATION BY COLOR

It may be desired to arrange the Roses in accordance with their colors, in which case the following lists will prove of service:—

PINK—Magna Charta, Paul Neyron, Mrs. John Laing, Killarney, Maman Cochet, Reliance, La France, Catherine Mermet, Clio, Baroness Rothschild, Mrs. Sharman-Crawford, and Anne de Diesbach.

RED—General Jacqueminot, Ulrich Brunner, Prince Camille de Rohan, Gruss an Teplitz, and Dr. O'Donel Brown.

WHITE—Frau Karl Druschki, Molly Sharman-Crawford, the White Killarney, and Clothilde Soupert.

YELLOW—Franceska Kruger, Lyon, and Soleil D'Or.

A great advantage of willow furniture is the fact that it seems at home with furniture of nearly any type

White wicker to the left, green willow to the right. A good comparison of weaves, and both in harmony with the room

The Willow and Wicker Furniture Family

AN INTRODUCTION TO WILLOW, REED, WICKER, PRAIRIE GRASS, FIBRE-RUSH AND CHINESE GRASS FURNITURE—THEIR POSSIBILITIES IN FURNISHING THE HOME

BY KATHARINE NEWBOLD BIRDSALL

Photographs by the Author and others

IT is surprising to find how few home-makers are at all familiar with the various kinds of woven furniture. One hears the words wicker and willow used almost continually as though the terms were synonymous, and both are applied to furniture made of reed or prairie grass as well as in their true sense. A few words as to their respective meanings, therefore, and the characteristics of the furniture, with some detail photographs showing the texture of the various weaves, may help to clear the matter up.

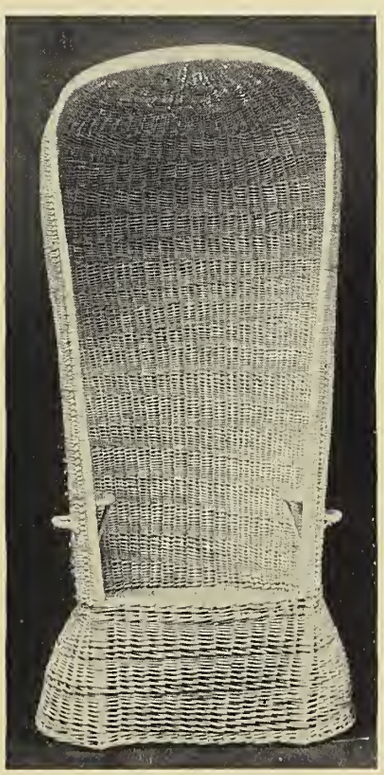
The best of this woven furniture is not only suited to the country home, the bungalow, the bedroom, but in the all-year-round living-room in country or city home, its beauty and utility can scarcely be exaggerated.

The distinguishing features between willow, and reed or wicker furniture are slight to the average eye. One will find, however, on close inspection, that willow-work is always coarser than reedwork, by reason of the willow withe being the larger. Therefore the workmanship on reed furniture is more complicated and more elaborate than willow, to give the needed strength. A wicker chair will need twelve strands of reed in a border where the same style of chair made in willow will require only six or eight to make it strong and durable.

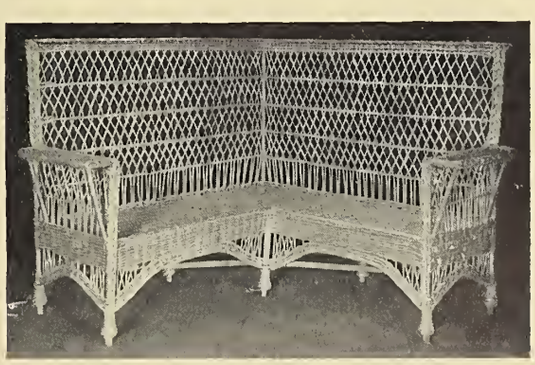
While the heavy furniture that has been popular for some years has its advantages, it has also two great disadvantages—that of its heaviness and its gloominess. Willow brings a breath of the brookside, a flash of the sunlight from the heart of the spring.

For solid comfort, combined with artistic effect and great durability, willow furniture is a great favorite. The cheapest in the end is perhaps the most expensive in the beginning, so one should be careful in selecting ready-made pieces to observe the workmanship as well as the material. Every piece of willow furniture is fashioned by hand—every article is hand-made from the raw material, with no glue and only very occasionally a nail. The harshest criticism that has ever touched willow pieces is that they occasionally "creak". Much of this creak is due to the shellac with which some manufacturers coat the furniture; and the creak wears off very soon when the

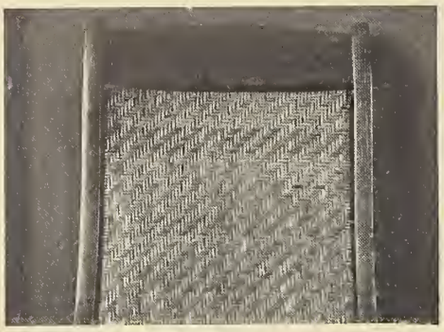
These swings cost from $12 up, depending upon the length



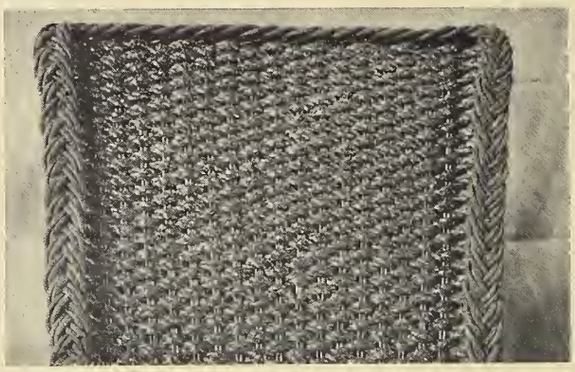
One of the first wicker types and still a favorite. The smallest cost $15



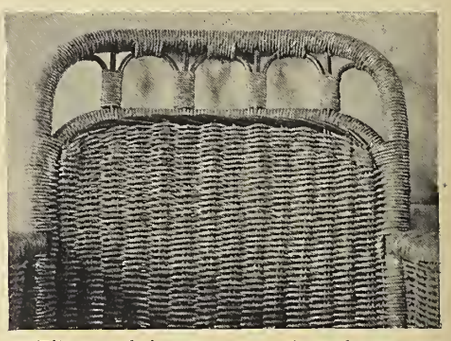
A corner seat for a piazza, 52 inches long each way, costing $25



Close-weave split rush is a new as well as an old favorite for piazza use. Rush chairs are seldom seen excepting with wooden frames



Prairie grass is a manufactured product woven together with cords. It wears well, though not so long as reed or willow



Fibre-rush is a paper product that wears well. It is more expensive than willow and reed

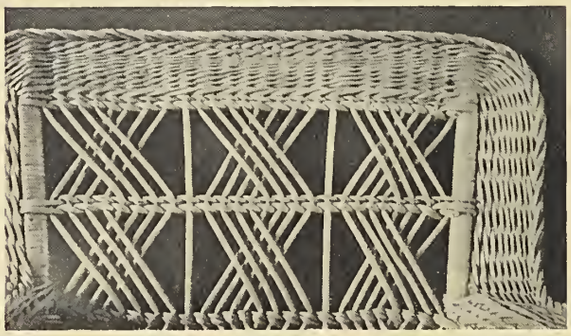
piece becomes acclimated. In the best made furniture however, where the willow is thoroughly pliable and the workmanship exact, the creakiness is not noticeable.

Some of the good points in the use of willow, besides its attractive appearance, are that its color may be changed as often as desired; it may be used in the natural state at the start and may be subjected to heat and cold without damage. In its natural state it may be cleaned by the application of water; and it may even be left out in the rain without damage to the wood other than a yellowing of the strands if left continually as a prey to the elements. Even then, after years of hard use, when a willow chair in its natural color has come to look sunburned, it is still as good a foundation for dye, paint or enamel, as when it was new.

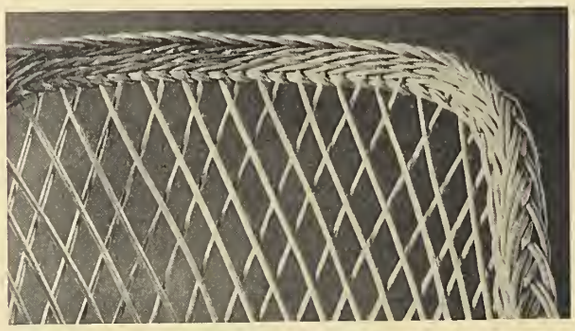
To color the natural willow is a simple matter for the home decorator, This can be done effectively with a reliable Japanese stain, supplemented by a colorless varnish or shellac. It is sometimes necessary to apply only one coat of stain; at other times a second application will be needed to secure a color to suit the eye. After being carefully applied with a brush, the stain should be rubbed gently with a cloth, to remove the excess and to make a smooth surface.

Some of the dealers in willow furniture first treat the willow with a pigment of lead, then with a special mixed color, the body of which is oil, and finally with shellac, if intended for indoor use; or with spar varnish if intended for out-of-doors. For coloring in brilliant hues, an aniline dye is used, with a finish of shellac. The willow assimilates turpentine and oil, acquiring a lasting color; if an entirely dull finish is desired, the stain is carefully rubbed in by hand and the varnish omitted. Water-color dyes are not desirable, as the colors are apt to fade, and to show the effects of the weather.

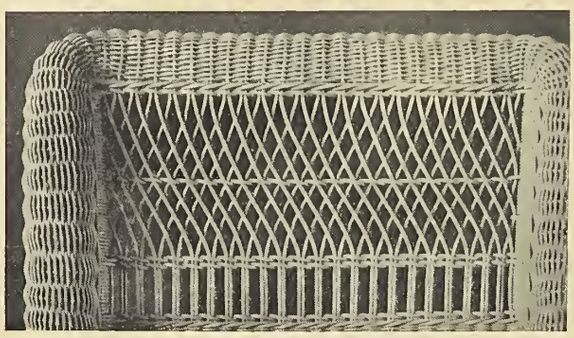
From an economic viewpoint, as well as from an artistic, it is desirable to buy the willow in the natural color, use it as it is until you wish to change its aspect, and then stain it at home with good



A solid border of willow with a cross-weave body. Several chair patterns are obtainable, costing from $6.50 up



The simplest design for willow work, with coarse cross withes and a braid edge. A small armchair in this pattern costs $4



The more intricate weave of the wicker, and the smaller withe, makes more work for the weaver, and consequently a higher price

Japanese stain mixed with turpentine. If desired to match room hangings, and you buy direct from the maker, give him the sample color and he will stain the willow to match or to tone in with the shade.

The possibilities in willow are great; for the clever workman who makes the pieces weaves from a sketch only, and can make any piece to fit a special corner of your room; and he can carry out an exclusive design. Being entirely hand-made, from raw material supplied by nature, it is quite probable that no two pieces of willow furniture are ever exact duplicates. This of course lends greatly to the distinction and artistic merit of the material.

Thus far we have spoken of furniture made only of willow. There are good points to be mentioned in connection with reed, wicker, prairie grass, fibre-rush and Chinese grass furniture, and the accompanying illustrations will serve to make clear the differences in texture and general appearance between these various materials. Reed or wicker may be bought "in the white" and colored afterwards in very much the same way as willow furniture, but with the remaining materials the pieces usually are sold already stained and cannot readily be altered.

To the housekeeper who has much of her own work to do, this light furniture cannot fail to appeal—the pieces are so easily moved, the positions so freely changed. A large easy-chair may be lifted in one hand clear of the floor, and a big settee or desk may be moved with a gentle push. This sort of furniture helps to make a game of housework that might otherwise be drudgery. Dust which will settle on the flat surfaces presented by modern furniture will miraculously disappear from the rounded surfaces of the woven natural materials.

The chairs and settees are often used without cushions, especially for summer, but may easily be made to suit any room with cushions of a color to harmonize with the walls; or, if desired, with the woven material itself colored in a harmonizing shade. Figured cretonne cushions are used extensively, for back, sides

This table of whole and split willow, in a convenient bedroom size costs $12.50

and seat; also plain colors in any suitable furniture material; as well as velours and silk in delicate colorings. A special chair intended for summer use is made of straight lengths of willow, not interwoven, which is intended for use without cushions. It is unusually comfortable and seems to conform to the shape of any body. The chairs made with wide spaces between the willow sticks are the most artistic, but the close and more expensive weave is perhaps more durable.

Great comfortable couches are made of these materials, strong enough to hold the heaviest of men, and some of them are now constructed with box springs, instead of having the regulation cushions. This form for the porch sleeper should prove invaluable.

A unique suggestion for a bungalow or cottage bedroom is to use this light woven furniture *throughout*. Single beds, fitted with comfortable box springs, make a change from the ever-present brass bed, and can be constructed at reasonable price. Beds are not among the stock articles furnished by the dealer, but any worker who has made the heavy couches can fashion a very satisfactory bed when supplied with a good design. Dainty desks may be had in various patterns; straight-backed, easy and high or low rocking chairs; dressing tables; waist and shoe boxes; couches; swings; tea wagons; smoking chairs; tables of varied design; dining chairs; high-chairs; muffin stands; anything, in fact, that one could want.

A pocket chair is a great piazza convenience, costing $6.50 as here or with two pockets

Grow Your Own Vegetables

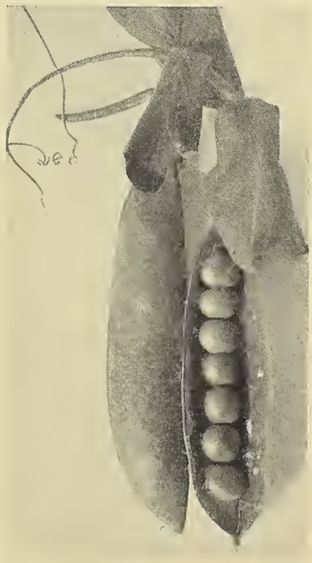
IV. THE IMPORTANCE OF FREQUENT AND REGULAR CULTIVATION OF THE GROUND TO KEEP DOWN THE WEEDS AND TO HELP THE SOIL TO RETAIN MOISTURE

BY F. F. ROCKWELL

[*This is the fourth of a series of articles which will cover in a thorough and practical way the subject of amateur vegetable gardening. The aim is to furnish the information covering every detail of what to do and in such a form that it will be clear to the very beginner just how to do it. Each article and its tabular data will give the information needed at the time of its publication, so as not to confuse the home-gardener with an overwhelming quantity of detail; that is, the reader will learn what is to be done at the proper time for doing that particular thing. Those who follow the suggestions made, from the selection of seed to the storing of winter vegetables, may confidently expect a successful garden.*—EDITOR.]

THE experienced planter does not need to be told very much about keeping his garden clean. He knows that if his crops are *cultivated* as they should be the weeds will never have a chance to get a start. The frequent stirring of the soil so essential to the best growth of plant life, if it is thoroughly attended to, makes the matter of keeping down weeds a side issue. There is an enemy much more insidious than Weeds, which must be fought to a finish by the gardener who hopes to be successful. It is *crusted soil*, that keeps out air; *crusted soil*, that lets out water. And yet the Weed bugaboo is so thoroughy fixed in the general horticultural imagination that I have had to use "weeds" in the title of this article, rather than risk scaring readers away with such an abstruse statement as "Cultivate to conserve soil moisture!"

Plants need to breathe. Their *roots* need *air*. You might as well expect to find the rosy glow of happiness on the pale cheeks of a cotton-mill child slave, as to expect to see the luxuriant dark green of healthy plant life in your suffocated garden. You will look in vain—and then most likely turn away from your meagre and tasteless crops, prematurely in the sere and yellow leaf, and say unpleasant things about those deceptive magazines which inveigled you into venturing upon the sea of horticulture. The fault will be your own—the trouble not with the sea but with your leaking boat. Admit air to the roots of your plants by frequent cultivation. Though the leaves are really their lungs, still the root system requires also a certain amount of air, just as you would suffocate to death if your pores were all tightly closed.



To produce large, healthy vegetables keep the ground cultivated so that it will never show crusted soil

There is another reason why the surface of your garden, especially about the plants, should be broken up, and be *kept* broken up, sufficiently to admit air freely. The food for plants, to a large extent, has to be what we may call predigested, that is, supplied in a very assimilable form, especially for some of the quick-maturing crops. The chief ingredients of plant food (nitrogen, phosphoric acid and potash) may be in the soil in abundance, but unless they are there in a form ready to be assimilated easily by the feeding roots of the plant, it may starve, on the principle that one would not grow very fat on a diet of frozen meat and vegetables. Air and water are both necessary to "convert", as the gentlemen with spectacles say, this raw plant food to a form in which the plants can use it. But long before they made their discovery, the man with the hoe observed that he must keep the soil nicely loosened about his growing crops, and that water was necessary, if they were to do well. Even the lanky and untutored aborigine saw to it that his squaw not only put a bad fish under the hill of maize, but plied her shell hoe over it.

Important as the question of air is, that of

If you have a wheel hoe with the drill seeder attachment the whole process of planting can be done with little more effect than walking up and down the rows. The cost is $11

water ranks beside it. You may not see at first what the matter of frequent cultivation has to do with water. But let us stop a moment and look into it. Take a strip of blotting paper, dip one end in water, and watch the moisture run up hill, *soak* up through the blotter. The scientists have labeled that "capillary attraction"—the water crawls up little invisible tubes formed by the texture of the blotter. Now take a similar piece, cut it across, hold the two cut edges firmly together, and try it again. The wetness refuses to cross the line: the connection has been severed.

In the same way the water stored in the soil after a rain begins at once to escape again into the atmosphere. That on the surface evaporates first, and that which has soaked in begins to soak up through the soil to the surface. It is leaving your garden, through the millions of soil tubes, just as surely as if you had a two-inch pipe and a gasoline engine, pumping it into the gutter night and day! Save your garden by stopping the waste. It is the easiest thing in the world to do—cut the pipe in two. And the knife to do it with is—*dust*. By frequent cultivation of the surface soil—not more than one or two inches deep for most small vegetables—the soil tubes are kept broken, and a mulch of dust is maintained. Try to get over every part of your garden, especially where it is not shaded, once in every ten days or two weeks. Does that seem like too much work? You can push your wheel hoe through, and thus keep the dust mulch as a constant protection, as fast as you can walk. If you wait for the weeds, you will nearly have to crawl through, doing more or less harm by disturbing your growing plants, losing all the plant-food (and they'll take the cream) which they have consumed, and actually putting in more hours of infinitely more disagreeable work. "A stitch in time saves nine!" Have your thread and needle ready beforehand! If I knew how to give greater emphasis to this subject of thorough cultivation, I should be tempted to devote the rest of this article to it. If the beginner at gardening has not been convinced by the facts given, there is only one thing left to convince him—experience.

Having given so much space to the *reason* for constant care in this matter, the question of methods naturally follows. I want to repeat here, my advice of last month's article—by all means get a wheel hoe. The simplest sorts cost only a few dollars, and will not only save you an infinite amount of time and work, but do the work better, very much better than it can be done by hand. You *can* grow good vegetables, especially if your garden is a very small one, without one of these labor-savers, but I can assure you that you will never regret the small investment necessary to procure it.

The wheel hoe, however, will not do away entirely with the work of hand hoes and hand weeders, and to the uninitiated brief descriptions of the various forms of these, and their uses, will be of some assistance.

The iron garden rake I mention first, because it can be used within a few days after the garden is made, and several days before the little seedlings are above ground, to rake, *very* lightly, *crossways* over the rows, thus destroying the first crop of weeds, and also to prevent the soil from crusting over, as it will tend to do after a rain.

The ordinary hand hoe is familiar to everyone. It is usually constructed with a blade six to nine inches wide and half that in depth, and is still employed more universally than any other single agricultural implement, because of the wide variety of use to which it can be put. It is used to open up drills or dig out hills for seeds, to cover the seed and firm the earth over it; and when the little plants push through, to break and loosen the soil about them, and to cut off and dig out weeds. Then, later, to keep the rows between the plants loosened up and clean, and to draw moist fresh earth about such plants as require it. In the infancy of agriculture—and half a century ago it had hardly been weaned—the hoe had to be made pretty heavy to stand all the rough work required of it. But now there is a modified form, often listed in the catalogues as an "onion hoe", which is much smaller and lighter, much easier and more rapid to use, and which, for opening up drills for small seed, and cutting out small weeds about plants in the rows—after the wheel hoe has taken care of the spaces between, is in every way preferable. In my own work, even in field culture of such rank growing crops as potatoes and corn, except for heavy soils, it

Try to get over every part of your garden, especially where it is not shaded, once in every ten days to break up the surface crust

has almost entirely supplanted the regular pattern. Then there is the "Warren" hoe, made especially for planting. Its heart-shaped blade will open up and cover furrows more rapidly, but not much better, than the ordinary hoe. The "scuffle" hoe is used for crops grown in narrow rows, especially during the latter part of their growth, but since the advent of the wheel-hoe, there is little use for it.

For some crops, such as onions, beets, carrots, and many others, you will find it necessary to use, while they are small, one of the various hand weeders on the market. This work is the most tedious connected with gardening, and will require the use of the fingers as well as the weeder, and much of the work must be done on hands and knees. But when one becomes accustomed to it, and, particularly in a small garden, it may be very pleasant work. Of the many hand weeders, personally I prefer Lang's, which has a bent solid blade, and most of our men seem to like it best too, but the individual must suit himself. They all assist in the work, and only practice can teach which may be best adapted to any one person. But whatever tool is used, the work of *hand weeding must be taken in time and done thoroughly.* Weeds must be pulled or cut out below the surface, or they will soon sprout again, more vigorously than ever. *Every inch* of the soil must be broken or stirred, or the hundreds of little weed seedlings, many of them not yet above ground, will not be destroyed, and they will mean work increased manifold a few weeks later, besides injuring the crop.

Both hoeing and hand weeding will be reduced to a minimum by the use of the wheel hoe. An attachment for hilling, or throwing the earth from the center of the row to and about the stem of the plants, may be had to go with it. The catalogues sent out by houses making these machines give many valuable points as to their various uses that lack of space prevents my describing in detail here.

The labor of both hoeing and hand weeding will be reduced to a minimum if you will spend a few dollars for a wheel hoe

Only actual work in the garden can teach the beginner the "knack" in using these various tools and machines, but he will find such practice to be absorbingly interesting.

In the remainder of this article I give a few "first aid" suggestions about the special cultural needs of various crops. But let me emphasize once more, in capitals, the need of all crops for THOROUGH CULTIVATION, during their entire growing season. And if, when they have matured and you can no longer "work" them, a few big weeds appear, cut these off to prevent their going to seed.

As many of the vegetables in the small garden will require about the same treatment, we will consider them in groups.

Asparagus and *Rhubarb* plants, though they are simply making growth for future service, should be kept carefully cleaned and cultivated to assist their development. If you have a few established plants of Rhubarb, a small dressing of nitrate of soda, not more than a handful, sprinkled about each plant and worked into the soil, will produce astonishing results.

Beans, Corn, Eggplants, Okra, Peas, Peppers, Potatoes, and *Tomatoes,* will stand being worked about more deeply than small seedlings like Carrots and Onions, and will want the earth drawn up about them a little at each hoeing, especially corn and potatoes. See to it that poles for pole beans and tomatoes are put firmly in the ground before these make much of a growth. Don't make an excavation and "plant" the poles; take a crowbar and make a hole just large enough to force them into. Pea-brush may be put in in the same way; then with a knife or pruning shears trim off the tops and all straggling branches, and stick them into the ground where the little plants can get at them easily, and thus be led to higher things. Watch Tomatoes, and particularly Eggplants, for Potato bugs and other pests.

Beats, Carrots, Kohlrabi, Onions, Parsnips, Salsify, Spinach and *Turnips,* will need attention as soon as the rows can be seen. Go through them with the hoe or the wheel hoe, working at a shallow depth and as close to the rows as possible without throwing dirt on the small plants. Then get your hand-weeder, and go over them on hands and knees (it really isn't as hard as it sounds). Even if they seem a little too thick in the rows, better leave the thinning until next weeding. After you have killed every weed, remember that you must keep the soil cultivated just the same!

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With beans, the ground may be worked over more deeply than with some of the other vegetables. Hoe the earth up about them a little each time

Floor Coverings for the Summer Home

THE AVAILABLE RUGS, MATTINGS AND CARPETS IN WHICH MAY BE FOUND WEARING QUALITIES AND GOOD DESIGN AND COLOR—HARMONIOUS TREATMENT OF THE FLOOR BOARDS

BY MARGARET GREENLEAF

Photographs by H. Shobbrook Collins and others

IN making the selection of floor coverings for the summer home there are two points which should be held well in mind:—first, the character and color of the furnishing and decoration of the room in which the rug or carpet will be introduced; and second, the quality of the textile itself. While to many people it would seem that these points should be reversed in importance, we purposely put them in this way; every good housewife will look for quality in purchasing the fittings for her home, therefore this feature will take care of itself, while unfortunately the necessity for harmony in color and design of the floor covering with the other furnishings of the room is not always sufficiently considered.

With the approach of the season for cool furniture coverings and the removal of heavy hangings, rid your floors of carpets, re-finish the floor boards and consider which of the many available kinds of rugs will make the floors look cool and inviting

There are manufactured to-day some excellent inexpensive domestic rugs, and these offer a much wider choice than was afforded a few years ago, when one was practically limited to matting, rag rugs, and art squares of impossible colors and patterns. One of the best all-wool rugs now made, which is well suited to a house of the bungalow type or on Craftsman lines, comes in delightful colors—rich mulberry red, golden and chocolate brown, dull blue, sage green, and mahogany. These rugs show a two-toned border effect, while the body of the rug shows the lighter tone. Some of the designs have spaced conventional figures in a lighter shade of the same color, or in ivory or black on a plain field. These rugs are hand-woven and of heavy wool and give good return for the money expended for them. In size 9 x 12 ft. the price is $36. The next stock size is 7 ft. 6 in. x 10 ft. 6 in., which costs $27.50. They may be obtained as small as 2 ft. 3 in. x 4 ft. 6 in. for $3.50. These rugs can also be made in special sizes and combinations of colors to order at about $3 a square yard. Where there is a pronounced figure in the side walls and draperies such a floor covering is particularly effective.

There is another style in all-wool rugs known as the "Scotch Art" rug. It is reversible and made in a great variety of colors, running largely to the more delicate tones, and is particularly suitable for bedrooms. These can, however, be made to order in any size or color. In size 9 x 12 ft. they cost $27.50. The smallest stock size is 1 ft. 6 in. x 3 ft., and costs $1.75.

Then, too, for bedrooms there are rugs made after the old rag rug of our grandmothers' days. These are sold under various trade names, among them the Priscilla, Pilgrim, and Rag-style rugs. These are all very good makes. The Pilgrim sells in size 9 x 12 ft. for $22.50. The Priscilla is a cheaper grade and sells in the same size for $18.

The best among the cheapest rugs to be found are those of matting made of heavy twisted straw. They come in good designs and colors, and frequently are found very effective in completing a color scheme for a summer cottage.

In furnishing a moderate priced bungalow, the floor coverings can be of the simplest type and yet the finished effect be thoroughly satisfying and practical.

In the large living-room, which is a usual part of the plan of such a house, if the walls are of rough plaster tinted in a shade of dull tan, the floor of yellow pine should be stained to a light brown tone and finished with a material which will supply the effect of rubbed wax, but which is more durable and does not require renewal. The hard usage to which the floors of a summer cottage—particularly in the mountains or at the seaside—are subjected makes the question of the finish given the floors an important one. A "Bungalow rug" in two shades of brown, almost matching the color of the woodwork, would look well in a room of this character.

If the size of the room requires it, this central rug may be complemented by two runners of the same weave and color. With the plain walls and the two-toned floor covering, figured draperies, cushions, etc., should be introduced.

For the dining-room, where the walls may be Delft blue in tone, and the woodwork stained a lighter shade of brown or treated with white enamel, the floor should be given the same color and

The pronounced design and vigorous coloring of this rug make plain walls a necessity

The Oriental in your dining-room receives hard usage; take it up to rest it through the summer

finish as the adjoining room. Here a matting rug would fill all requirements and look well, besides being extremely inexpensive. Such a rug has also to recommend it the ease with which it may be removed on cleaning days. A design in dull blue and green of Chinese suggestion might well be selected. A good effect is obtained by using rough scrim curtains at the windows with this pattern stenciled as a border (in smaller size) reproducing the green and blue of the rug.

Where the house is old and the floors are not in condition to be exposed, matting by the piece can cover all floors attractively. A heavy padding of quilted paper should be placed beneath the matting; this preserves it, as well as making the floor covering more agreeable to the tread. With this treatment for floors, rugs may or may not be used, as desired. A beautifully cool and dainty effect is obtained where no color is introduced on the matting-covered floor. Where walls are light in color, and much gaily-flowered chintz showing a white or ivory ground is employed, the finished room is dainty and attractive.

A good quality of matting which will give satisfactory service can be purchased for $14 a roll of 40 yards. The cheaper grades are scarcely worth buying, as they wear so badly.

A very special interest has been aroused recently in old Chinese rugs, as some very beautiful specimens of these have been on exhibition in New York during the past year. The wonderful tawny yellows, dull bronze, copper, blue, and gray tones these show are a revelation in color quality. The price of these rugs is prohibitive to the majority of people and their rarity makes them almost museum pieces, but it is interesting to note that some modern Oriental rugs of the Mahal family show similar colors, and while the designs in these carry only a general suggestion of the Chinese characteristics the whole effect is reminiscent of the more costly rug.

Such a rug is really a wise investment, as it lends itself well to the decoration of any room which is not too delicate in treatment. In about 13 x 15 ft. size such a rug may be purchased for $300 or a little less. These rugs, of course, are suitable to interiors fitted for all-the-year-round use or to the more elaborate summer home.

Also the Body Brussels, the Royal Wilton, the Axminster, and other good and well known makes of domestic rugs give satisfactory service in such houses. In selecting any of these, however, much care must be taken to find those of good design and soft colors, as the time has evidently not yet arrived when the maker produces *only* harmonious and beautiful effects in floor coverings.

Rugs of Oriental design adjust themselves to all types of rooms. Walker & Hazzard, architects

The old Chinese rugs are prohibitive in cost for most of us, but modern Mahals show similar colors

Practical Talks With Home-builders

VII. SECURING AN ADEQUATE SUPPLY OF GOOD WATER—THE PROCEDURE IN CONTRACTING FOR AND DIGGING WELLS—GRAVITY TANKS AND AIR PRESSURE SYSTEMS

BY ALEXANDER BUEL TROWBRIDGE

[*This is the seventh of a series of intimate, helpful talks with those who are about to build. The aim is to offer untechnical suggestions to prospective home-makers in the hope that many of the usual mistakes and difficulties may be avoided through foreknowledge. The talks are written for those of moderate means rather than for those to whom economy is no object.*—EDITOR]

THOSE who build in the open country, outside of the water service of a town or corporation, should take the matter of water supply into consideration even before the house plans are very far advanced. No building site, however alluring, is worth considering if it is not supplied with plenty of good water.

Unless the ground is very rocky the location of a well is not dependent upon any fixed rule. Driving a well consists in forcing a 4-inch, 6-inch or 8-inch pipe into the ground by means of special machinery not unlike that of a pile-driver in operation. An ingenious form of plunger is used to remove earth, sand and gravel from the interior of the pipe. The well is brought to the spot in sections 8 feet or 10 feet long, the separate lengths being screwed together as the pipe descends into the earth. The top of the pipe is protected from the blows of the hammer by a large wooden block.

Generally it is impossible to foretell the depth at which water in abundance will be found. If wells have been driven in the near neighborhood a guess may be made which will enable a contractor to submit a definite figure for the work. Even then he takes chances, for the water-bearing stratum may slope downward from the neighboring property, thus giving him a deeper problem to solve. If a well-driver is required to give a definite bid, guaranteeing to find plenty of water, in a locality not entirely familiar to him, he will put up his price to cover a possible loss. For this reason the most satisfactory method seems to be to ask for estimates per foot of depth. The contractor will drive the pipe until he reaches a water-bearing stratum of gravel. If, in his judgment, the stratum looks favorable, he will test with a pump the quality and quantity of the water. If, then, he believes the supply is ample he is ready for a 24-hour test. This consists first, in timing the operation of filling a 50-gallon barrel. The strokes of the pump are timed and counted. At the end of 24 hours of continuous pumping the same operation of filling the barrel is tried. This time the speed of the pump is carefully kept the same as it was during the first test. If there is no apparent diminution in the supply the test for quantity may be accepted as satisfactory. For quality a chemist should be engaged to analyze the water in a laboratory and submit a signed report. It is obviously impossible for an owner or an architect to be present during the continuous 24 hours of pumping, so the word of the contractor must be accepted for a large portion of the test. It is to his interest to produce a good well, so it is not worth while to worry over the danger of being deceived in this test. The best way is to deal with a first-class contractor who has many references of satisfied owners to speak for him.

In letting a contract the specifications should cover the additional cost per foot of a brass screen which is placed in the bottom of the well to keep fine gravel and sand from getting into the water. Also it is wise to have some provision for extra pay in case rocks are encountered during the driving; otherwise you will pay a higher per-foot rate. The depth of the well may be readily measured by means of a weight and a cord, also the depth of the water in the well. In a recent case a well was driven to a depth of 70 feet and in the process the pipe went through two minor strata of gravel before the contractor believed it was time for a 24-hour test. The third stratum was about 10 feet thick. The water rose in the well to a height of 30 feet, at which point it remained approximately stationary. These figures were necessary before the stroke of the pump and the horse-power of the engine could be calculated.

The customary methods of storing the water supply are: a tank in the upper part of the house; a tank raised on a trestle or placed in a water tower; and an underground supply under air pressure. For large places, where the tank and trestle may be hidden among trees, or where a picturesque water tower may be built, the gravity system seems to be acceptable. The engine chosen to operate the pump is obliged to lift the water much higher in this system than in the underground storage system, and must, therefore, have greater horse-power. Windmills are still popular in some sections of the country, but their chief objection seems to be the danger of a protracted calm. For small places where the unsightly tank in the air cannot be considered, the pneumatic system is excellent. This consists of an air-tight iron storage tank, buried a few feet below the surface of the ground, joined to a machinery group consisting of a pump, an air compressor and an engine or motor. By means of belts, shafting, etc., the engine is coupled to the pump or to the air compressor independently or to both at the same time. When the tank is ready for use it has two-thirds of its capacity occupied by water and the top filled with air under a pressure of 40 lbs. to 60 lbs. A gauge gives the desired information as to pressure, and a glass tube tells how high the water stands in the tank. A cylinder 6 feet in diameter and 30 feet long will hold, when two-thirds full, about 4000 gallons of water. The amount of pumping needed per day varies with the family life. In summer when shower baths are popular and the laundry work is at the high-water mark, it might be necessary to pump for an hour each day, whereas a half hour would suffice in winter. If, at the end of a day, the pressure weakens by a reduction of the stored water, the air compressor may be coupled to the engine and in a few minutes the pressure will be sufficient to hold through the night. This is worth while as a safeguard against fire.

Some of the companies that make and install these pneumatic systems recommend the use of internal combustion engines in preference to electric motors. There are two sides to this question. If a house is to be used throughout the year and the pump room is not heated, there is great danger of injury to the engine through freezing of water in the cooling jacket. A draining cock must be inserted and the jacket completely drained each day. Also, the engine is hard to start in cold weather. The electric motor responds instantly to the closing of the switch and is affected by outside troubles only when the wires are down in a heavy storm. So the problem is governed largely by the character of the house, whether it is for summer use only or whether it is an "all the year" house.

One of the most natural and reasonable places to plant flowers is in a border edging the house or along a path

The Part Flowers Play in Garden and Landscape

WHERE FLOWER BEDS MAY BE EFFECTIVELY USED AND WHERE THEY BECOME EYESORES—SUGGESTIONS FOR FLOWER BORDERS AND FOR COLOR ARRANGEMENT

BY GRACE TABOR

Photographs by Nathan R. Graves and others

[*The eighth of a series of articles by Miss Tabor on the subject of landscape gardening as applied to the American home of moderate size. Preceding articles in the series have appeared under the titles: "Utilizing Natural Features in Garden Making" (Oct., 1909); "Getting Into a Place" (Nov.); "Formal or Informal Gardens" (Dec.); "Screening, Revealing and Emphasizing Objects or Views" (Jan., 1910); "Boundary Lines and Boundary Plantings" (Feb.); "Planting Trees for Air, Light and Shade" (Mar.); "Planting Shrubs for Mass Effects" (Apr.). Questions relating to further details and planting information will be gladly answered.*—EDITOR]

IT is decidedly contrary to our American ideas, but it is nevertheless a fact that a garden may be absolutely flowerless—and yet be lovely. And on the other hand, one may have quantities of flowers and yet have no garden in the true sense. In other words flowers do not make the garden, revolutionary though the thought seems at first glance. The conception of them which immediately establishes their real place holds them to be the garden's jewels—the bright gems with which its design is embellished and "picked out" as a jeweler would say. They may be used in quite as lavish abundance with this idea prevailing as any enthusiast can wish—but they will be used quite differently from the customary fashion of planting wherever fancy strikes and the space presents itself.

However beautiful the ruby, the opal, the sapphire may be, lying unset within one's hand, none will deny that their loveliness is brought out and shines to far greater advantage when the craftsman has worked them into proper relation with each other, and with the metal that forms a clearly thought out and purposeful pattern around them, as it supports and binds them into place. And, to carry the analogy still farther, the designer gives the eye intervals of rest from the dazzle of precious stones in a piece of jewelry, which correspond exactly to the relief from color and brilliance which should be provided for it in the garden.

Flower beds of this sort are justifiable when they carry out the design of a formal garden

The rule of contrast that came in for attention when light and shade were under consideration, here presents itself again. Applied to the question in hand, it shows us at once that there must be places where no flowers bloom, in order to accent and emphasize the flowery spots—and it more than hints that the secret of brilliancy and a spirited liveliness in the garden lies in the liberal use of white flowers—because, of course, white furnishes a much more vivid contrast with many colors than green, and contrasts more vividly with green itself. Indeed, white blossoms are, in

When flower beds are used in a formal way they are much more effective if they are extremely simple in outline

one way, the most precious of all—the diamonds of the collection, that enhance the colors of all they are brought in contact with and at the same time reconcile them one to another, when they are inclined to clash.

But this I mention only in passing; the questions that have to do with color are premature just here, for the first proposition must deal with the locating of flowers in the garden—with the manner of determining their place in any particular garden design.

FLOWER BEDS

Sometimes it is easier to find out what to do by eliminating the things that ought not to be done, and I think this is especially true of gardening, from the landscape or pictorial side. We have grown so accustomed to doing it wrong that the habits are fixed, and we cannot oust them by the accepted plan of ignoring them and cultivating the right ones in their places. They simply will not be crowded out, even though the better ideas are acquired, but crop up continually like noxious weeds. So up by the roots let us drag them and start anew.

First, here is the flower bed habit, almost the greatest abomination of them all! It is going to die hard even with those who truly wish to kill it—and many there are who will not wish to, for its star and crescent and circle and triangle forms have so impressed themselves upon its victims that they cannot see a stretch of smooth and velvet turf without an instant temptation to fall upon it and carve some one of these figures from its heart.

But lest I seem unduly prejudiced let me hasten to say that there are places for flower beds—a few places—and that, *in their place*, I am not objecting to them in the least, although I have never been able to see any beauty in the gimcrackery which shapes them on the elaborate lines that good, wise old Bacon dismissed contemptuously with "They be but toys; you may see as good sights many times in tarts." He spoke of the parterre filled with colored sands instead of flowers, to be sure—but the fancy beds of to-day are the direct descendants of these sanded parterres, "knots or figures with divers-coloured earths."

A flower bed brings us again to the flowers' likeness to jewels, for properly placed, a bed occupies a position in the garden corresponding to the position of a properly used jeweled pin or buckle on a robe. (I say "properly used" to evade the dictum of fashion which is sometimes known to strain a point for the sake of adding a little extra trimming.)

A study of the costume of any well clad race will show at once that pins clasp two portions of a garment together or hold the folds of some drapery in place; that buckles buckle something. Indeed by going back to derivatives the idea can be emphasized still more, for "buckle" comes from "*bocle*," which is the boss at the center of the ancient skin-covered, wicker-woven buckler or shield—the meeting and gathering up of the wicker at the center being the reason for the prominence.

Here is exactly the demonstration of reasonable and proper use that we need; likening the flower bed to a jeweled buckle, it is at once apparent that the places for it must be focussing points in the general design—*centers*, not necessarily in the midst or middle of the general scheme, but rather points to which the strong lines of the design converge possibly, or from which paths branch. In such positions a flower bed of simple form—circular or oval or conforming to the lines which approach it—is in good taste. Elsewhere it is exactly what an elaborate jeweled buckle or pin is, when attached to a gown in some utterly and obviously useless position—a *gaucherie* of which one does not like to feel oneself capable.

The beds which carry out the design of a formal garden are of course exempt from this condemnation, having as they do a very real place in the design. These too, however, are of the simplest form and outline—if the designer is an artist—and are so arranged as to give the relief already spoken of which comes of suitable spacing. All other flower beds fall under the ban—let them be taboo to those who want them—and who, for wanting them, deserve them.

There is a place for flower beds but it is not there, where the unrelated units spoil a perfectly good lawn

FLOWER BORDERS

Ever and ever again recurs one question in every branch of landscape planting, and that is "Is there a reason for it?" Not simply the personal reason of liking or disliking any particular thing, but a *real* reason, based on logic and good sense and utility; that is the kind that must be advanced to gain the approval of the highest standards. And that is the kind that may be advanced for the garden form known as a "border." The name alone implies that.

A border follows something, *borders* something, ornaments something; is an attribute of something greater than itself, is secondary to some more important thing, to a conception of a whole—in the case of a garden secondary to some particular portion of it, taken as a whole. Possibly it follows a walk or drive, or the side of a building, or the line of a terrace, or the margin of a lawn; it really doesn't matter what, so long as it follows something. So long as it is truly a border be sure that it cannot go wrong; the limitations of that definite name will keep it what it ought to be.

And it may be straight and narrow, like the path of virtue, or

it may dawdle along in all manner of curves, according to the thing it follows. That is a matter that settles itself; likewise its length is pre-determined and sometimes, though not always, its width. A border that can be reached from both sides can of course be wider than one which must be tended from only one.

Generally speaking, it is safe to say that walks within private grounds ought always to have a border, on one side anyway, if not on both—the exigencies of the situation will decide this—and the hedge, fence or lattice divisions between different parts of the grounds also invite such treatment, invariably. I should, however, hardly call the planting of perennials in the foreground of shrubbery, a border in themselves, for they are placed intermittently when thus used and only when they and the shrubs are considered together, does a "border" result.

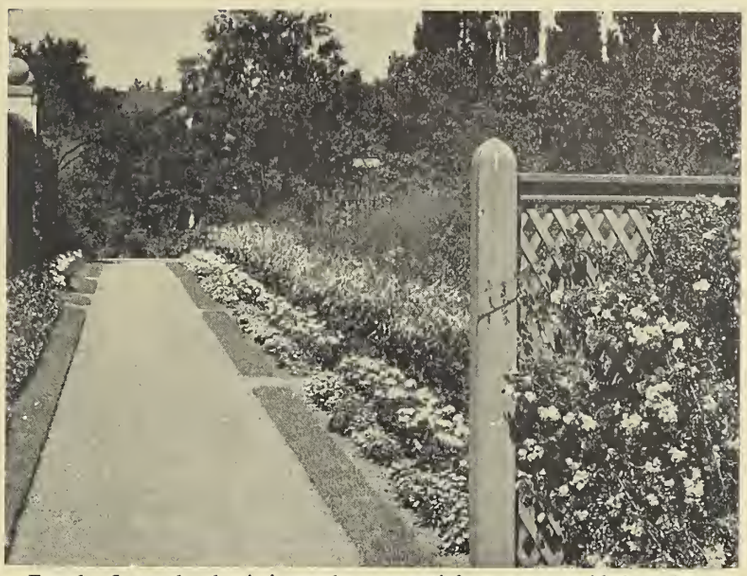
COLOR AND GENERAL ARRANGEMENT

Any wild roadside border where Nature has been allowed to have her way undisturbed, is usually an unrivalled object lesson in planting, for both color and mass. One of the loveliest borders I have ever seen followed the bank of a tiny brooklet as it meandered across a meadow which lay at the foot of a gentle slope, whereon dwelt some splendid beeches. Here Nature and Art combined and from early, tender spring until the lusty autumn, color succeeded color in the magic broidery that fringed the little stream and divided the pleasaunce from a hay field beyond. Only the native plants and "weeds" had found lodgment there, and it was wild in the best sense of the word. One thing or another dominated it at different times during the season, but *there was never an unbroken line of bloom* the entire length of it. Early in the summer clumps of iris, bearing a scattered dozen blossoms, broadened suddenly here and there into great masses which presented a marvel of almost solid blue, but these gave way to long stretches of vari-colored green where no blossoms were. Later, marsh mallows spread their pink loveliness like rosy clouds at intervals; daisies flourished in dazzling whiteness, and elder and the meadow sweet; then came goldenrod, and white and purple wild aster. Each month brought its dominant note, but always there were quantities of green and plenty of white, so nothing ever clashed, though each strong color held over until its successor was well established. And the whole length of the border—several hundred feet—was always a treat for even the weariest eyes or head, every day, all summer.

Here then is one of the fundamental secrets—if secrets they be—of planting a border, or, speaking more broadly, of planting flowers. Let there be a succession of *dominance*, not merely a succession of bloom; let one color in different shades be repeated, here in a mass, there in a few fugitive blossoms throughout the whole. By this I do not mean that other colors are to be excluded, by any means—but everything should be secondary to blues when blues prevail, to yellows when they lead, to scarlet, to pink, to any dominant hue.

Of course this means that clumps, varying in size, of the leading varieties chosen should be planted more than once and possibly several times in the length of a border. These, blooming simultaneously, carry the color throughout the whole; then, when they have finished blossoming, they furnish the necessary intervals of green, while their neighbors, who have been their green reinforcement, go on with the procession under the color which they have to offer. White-flowered plants of one kind and another will supply blossoms to keep each delegation company, while odds and ends, planted one kind in a group here, another kind there, may fill in the "chinks" and give sufficent variation to stimulate interest.

In other words a multitude of colors may and should be present at all times, but in this multitude *one* should always be more in evidence than the others. It is practically the same as a color scheme in anything else: a gown, a room, a jeweled bauble, a



For the flower border it is much more satisfactory to avoid these long, straight rows and to plant so that there will not be an unbroken line of bloom in the entire length at any time

picture—each one has its color motif. Other colors appear, complementing sometimes, contrasting or harmonizing, as the case may be, but always secondary to the leading color; and if this is not so, what a disastrous failure any one of the things mentioned is sure to be!

Certain tones dominate when used in much less quantity than others. Yellow for example comes right out and shouts wherever it appears, and for this reason less plants producing yellow flowers are needed than of any other hue. Blue, on the contrary, continually retires, consequently it must be used in profusion; this is true of the purple also, only in less degree. Red stands about midway between the yellow and blue, growing less obtrusive as it grows darker.

Remember, too, that blue is the color to use when a sense of distance in small space is to be produced, or actual space exaggerated, while yellow diminishes space in rather more than inverse ratio, bringing even remote points forward and into the picture in a sometimes startling fashion.

The kinds of flowers to plant are of course largely a matter of individual preferment. Annuals, lovely though they may be can hardly be seriously considered in a composition that must, primarily, be permanent in order to enjoy that charm which is

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Bacon said of such as these "They be but toys; you may see as good sights many times in tarts"

The most important requirement for growing good celery is a rich, moist soil. It is readily raised in the small back-yard garden, where adequate irrigation is easily possible

Celery-growing for Everybody

STARTING THE PLANTS FROM SEED OR SEEDLINGS—THE REQUIREMENTS IN SOIL AND CULTIVATION TO GROW 400 BUNCHES ON TEN SQUARE FEET—A SIMPLE AND SATISFACTORY METHOD OF BLANCHING

BY DR. C. D. JARVIS

Photographs by the J. H. McFarland Co., and N. R. Graves

IT is remarkable that celery should be left out of so many home gardens. Contrary to the general belief, it is not a difficult crop to grow. Success in this direction is dependent upon the supplying of a few modest needs. The most important requirement is a rich, moist soil. Celery is well adapted to growing in the back yard, for there is probably no vegetable crop that responds so readily to good treatment. During the hottest days in the summer it is greatly benefited by irrigation, and water is usually available in the small back-yard garden.

Celery is one of our hardiest vegetables, being able to withstand several degrees of frost. For early use it is set out in the field as soon as the ground can be fitted. The late crop is usually planted in July and left in the ground until the ground freezes, making its best growth in the fall when the nights are cool. There is seldom any trouble from insects and diseases. The celery worm sometimes appears but can be controlled easily by hand-picking. The disease known as rust seldom causes trouble and may be prevented by spraying the young plants with Bordeaux Mixture.

THE EARLY CROP—SOWING THE SEED.

Although many who begin this year their first celery raising will purchase the young plants all ready for setting out, it will be interesting to learn how the early crop is started, against being ready to start one's own seedlings another season.

The seed for the early crop will have been sown about the first of February, or two months before planting time, a "flat" about twelve by eighteen inches in size having been employed to grow enough plants to supply the average family with all the celery it can use. Such flats are easily made from wooden soap boxes, which may be obtained at any grocery store. The flat, when prepared for early plants, is filled with fine rich soil. Ordinary garden soil will answer the purpose, but it is greatly improved by mixing in some well rotted stable manure or leaf-mold. The addition of sand likewise improves a heavy clay soil. The soil is sifted into the flat and the seed sown in rows about two inches apart. After dropping the seed, about a quarter of an inch of soil is sifted over them and the soil firmed down with a short piece of board or block. The flat is then watered liberally and placed in a warm position. To prevent the seeds from being washed out, a piece of moist burlap or cheese-cloth is thrown over the surface. The soil is not allowed to become hot and should never be re-watered until required. When the plants begin to push up through this ground they are placed in a window where they will get the most light.

PRICKING OUT

When about an inch above ground the little seedlings are ready to be pricked out. The object of pricking out is to give the plants more room and to encourage the development of a large root system. The seedlings are then watered and then transferred

one by one into other flats, setting them about an inch apart each way. A better root system may be formed if the tap-root is removed in every case. In about two weeks, when the plants have started to grow nicely they may be transferred to other flats again, giving them a little more room. This second pricking out is not necessary but tends to make stockier plants. About two weeks before planting time the young plants should be placed outside during the day to harden off.

TRANSPLANTING

There are several methods of growing celery, but the one most satisfactory for small gardens is the trench method. A trench about eight or ten inches in depth is dug and about half filled with well rotted stable manure. The manure should be mixed thoroughly with about the same quantity of fine soil, leaving the trench nearly filled. The plants, after watering, are taken from the flats, and set about five or six inches apart along the trench. In setting the plants it is important to firm the soil well around the plants. The tips of the leaves are usually cut off at the time of transplanting to prevent excessive transpiration. They should be shaded from the hot sun for several days after planting. This may be done by placing boards over the trench. The plants should be shaded only when the sun is very hot. Every precaution should be taken to prevent the plants from drying out. There is danger also of having them too wet. As the plants become larger care should be exercised in keeping water from the heart or inner leaves of the plant, and the plants should not be handled while they are wet with dew or rain.

BLANCHING

Probably the simplest and most satisfactory method of blanching celery is that of standing boards on edge on each side of the row. They should be sloped inward somewhat at the top and held firmly in place with cleats at intervals across the top. The soil should be banked up against the boards on the outside so that the latter may be raised from time to time. The boards should come up almost to the tops of the plants and be raised as the plants grow.

INTENSIVE CULTURE

Those who have only a small area at their disposal will be interested to know that it is possible with special treatment to grow 400 bunches of celery on ten square feet of soil. To do this the soil must be extremely rich and the plants set six inches apart each way. Water must be supplied liberally whenever the plants require it. Another advantage of this method is that the plants being close together will blanch themselves. The varieties White Plume and Golden Self Blanching are better suited to this system of culture. While it is not always possible to produce extra large bunches in this way, large yields of medium-sized bunches may be confidently expected.

Nearly every grower of celery has his own pet system of blanching the stalks. Boards, standing upon edge on either side of the rows, sloping somewhat towards the plants and held in position by cleats nailed across the top at intervals, form probably the most satisfactory method

THE LATE CROP

The growing of the late crops for fall and winter use differs very little from that of the early crop. The seed for this purpose is usually sown about April in a hotbed in the garden and the seedlings transplanted once or twice before being set in their permanent position. The late crop of celery usually follows some other crop such as beans, peas, radishes, lettuce, or beets and is not planted until about the middle or last of July. The blanching may be done in the same way as described for the early crop, but where there is plenty of room the rows may be farther apart and the plants blanched by banking them with soil. This is done by grasping the plant with one hand and packing the soil tightly around it with the other. More soil is then banked up against the plants with a hoe. In order to get enough soil for this purpose the rows should be at least four feet apart. In small plantations, however, the necessary soil may be carried in with a wheel-barrow. To avoid so much hand work the leaves may be tied up with weak twine or yarn. The string may be attached to a stake at the end of the row, twined around each plant, and the other end fastened to a stake at the other end of the row. The soil then can be banked up with a hoe without the preliminary handling. The important part about blanching is to keep the light entirely away from the leaf-stalks, leaving only the tops of the leaves exposed.

STORING THE SURPLUS

The most convenient way to store celery on a small scale is to cut off the bulk of the roots and pack tightly in boxes. The boxes should be about two feet deep and each supplied with three or four inches of light soil or coal ashes, into which to pack the bases of the bunches. The soil should be kept moist, not wet, by pouring water through a long-throated funnel. If any water should get on the leaves it is likely to produce disease. The boxes should be stored in a cool, dark cellar or shed. If stored in this way and kept at a uniformly low temperature, it is possible to preserve it in good shape till the following spring.

IN CONCLUSION

There has been a widespread impression among amateur gardeners that celery is one of the very difficult crops—one to be attempted only if one had the assistance of an expert gardener. From the foregoing instructions it will be understood, I trust, that celery-growing is a comparatively simple matter after all, and there is no doubt that the home-grown fresh product amply repays the little care expended upon it.

"LYNDANWALT," THE COUNTRY HOME OF MR. W.
The windmill is not merely a decorative feature of the estate; it actually suppls

AT GERMANTOWN, PA. Oswald C. Hering, architect
with all its water The thatching was done by a lately arrived Irishman

"LYNDANWALT," THE COUNTRY HOME OF MR. W. E. HERING AT GERMANTOWN, PA. Oswald C. Hering, architect
The windmill is not merely a decorative feature of the estate; it actually supplies the house with all its water The thatching was done by a lately arrived Irishman

Lyndanwalt is a splendid example of forehanded planting. Vines were started almost before the carpenters left and as a result the five-year-old house is thoroughly blended with its site. Oswald C. Hering, architect

"Lyndanwalt"

AN AMERICAN ADAPTATION OF AN ENGLISH FARM—A COUNTRY HOME NEAR GERMANTOWN, PA., THAT WAS NOT CONSIDERED FINISHED WHEN THE BUILDERS LEFT

BY OSWALD C. HERING

Photographs by R. T. Jeffcott

IT is an unfortunate thing for the general appearance of our American countryside that the majority of people feel—when they have built a house—that one of their great tasks in life is finished. As a matter of fact they have at that stage of the proceedings merely laid the foundation of what can, if judiciously handled, eventually be made into all that the word home implies.

We must as a people grasp the idea that the mere piling up of bricks and mortar of stone masonry and woodwork does not make the home, any more than the reading of the lines makes the play.

Just as a comely and clever woman accentuates her loveliness by dressing in a manner becoming to her individual style, and is seen to the best advantage in surroundings reflecting her personality, so a house should have a suitable environment and a becoming dress of foliage in order to appear to best advantage. To the "atmosphere" surrounding any object is largely due the charm of the impressions received of the object itself. A painting or a piece of sculpture may be an admirable work of art, but the full force of its beauty will be felt only in an appropriate situation. In the Rijks Museum an entire wall is allotted to each of the three great Rembrandts; the light is trained upon the canvases in such a manner that none competes with the others and the observer's attention is thus fixed and held spellbound by the genius of the Dutch master.

Unlike nearly all half-timber work in this country Lyndanwalt has been built with solid beams rather than the usual strip imitation

Lyndanwalt, the country home of Mr. W. E. Hering, illustrates the point I wish to make. The house crowns the summit of one of the hills overlooking Huntington Valley, its broad terrace on the south side commanding a wonderful panorama of the gently

While the small cuttings of English Ivy were making their slow growth the broad surfaces of new masonry were temporarily covered with Virginia Creeper and Japanese Ivy which were gradually removed

In the double pergola extending out from one end of the main house a dozen kinds of flowering vines are represented, giving from spring to fall intermittent flares of color against the dense foliage

rolling meadow and woodland of Eastern Pennsylvania. A thick grove of oaks, chestnuts, and spruces—all splendid old-growth specimens—forms a magnificent background for the house to the north, sheltering its main entrance.

Lyndanwalt reflects clearly the personality of its owner. It portrays the home of a typical American gentleman who has fought and won the battles of business and purposes to devote his remaining years to the full enjoyment of his rural possessions. To be sure, it has cost a small fortune to achieve the result, but money alone could never have made Lyndanwalt. There is here something more than a mere house. Compare it, for instance, with some of the great country places of wealthy Americans where unlimited means have resulted merely in cold palaces or forbidding castle-like strongholds that are anything but inviting, anything but homes suited to their environment.

As the plan shows, the service wing is carried back at an angle from the main body of the house, leaving for the main rooms an uninterrupted view over the valley

While the owner and architect agree that, were the problem to be solved anew, improvements could be made, there yet is about this offspring of the Elizabethan farmhouse an atmosphere that charms and that can be directly traced to the owner's enthusiastic efforts to give the building a setting both appropriate and harmonious, and that will enhance what merit the architecture itself may have. It is only by this unceasing personal care in every detail, this indefinitely continued home-making, that a country home of distinction can be produced,—and, incidentally, that is just where all the keenest pleasure in home-building comes in.

In the billiard room the frieze, painted by a well known portrait painter, represents the games, starting at the left with chess

The carved stone fireplace, beamed and molded plaster ceiling, and the dark oak wainscoting make a consistent English dining-room

The ideal rock-garden is a shaded ravine with plenty of rocks, a brook if possible, and a light, sandy soil impregnated with decomposed limestone

Rock-gardens and How to Make Them

BY G. A. WOOLSON

Photographs by H. H. Swift, M. D.

THE successful rock-garden is one in which its maker simulates natural environment so far as he can. The ideal rock-garden is a shaded ravine, replete with rocks and a brook. Glades of this sort however, whether natural or artificial, are for the favored minority only. The majority has to content itself with far simpler gardens; but a small rock-garden, if judiciously placed, will afford more pleasure in proportion to time spent and space occupied than one can obtain from almost any other sort.

Partial shade is imperative. In the absence of trees or shrubbery, a shaded retreat may be effected with vines alone; and for this purpose there is nothing better than the Virginia Creeper (*Ampelopsis quinquefolia*). An alcove formed by buildings that cut off the brunt of the sunshine may answer very well in lieu of tree or vine.

In the selection of rocks, most of us have to take what we can get; given a choice, sandstone and calcareous rocks are preferable. Freshly quarried stone of any kind should never be used; the more weather-beaten the better for the place assigned. Nothing can surpass the picturesque quality of a bit of old limestone in process of disintegration. Occasionally one sees a giant cobblestone landed high and dry on a pretentious lawn—just a bald impenetrable mass without seam or depression wherein any kind of plant-life could gain a foothold. Rocks which are of no possible use and are devoid of beauty are out of place on any lawn.

Rock-plants in general require light, sandy soil, impregnated with decomposed limestone. If this is not at hand, a mixture of old mortar or brick rubbish will answer. Certain species, however, thrive best in leaf-mold, black and beautiful.

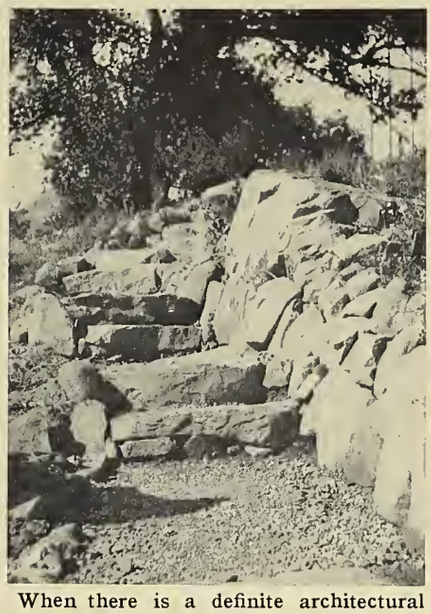
Whatever form is adopted for a rock-garden see to it that there is a soil connection through every pocket and crevice with the earth beneath, and that the top soil is firmed down to it, otherwise capillary attraction will have no better chance of keeping the earth damp than in an undrained flower-pot. This is a fundamental principle on which successful rock-work depends.

Ferns, of course, belong unmistakably to the rock-garden, and violets too

Is your garden soil full of large stones? Rake them out and construct a rock-garden

Give the delicate Foam Flower a corner in the rock-garden's base

By all means have some Maidenhair Spleenwort ferns, and keep them watered



When there is a definite architectural reason for rock-work, the addition of the proper growing things makes the ideal rock-garden

Do not forget the Maidenhair fern to form a background for the wild flowers

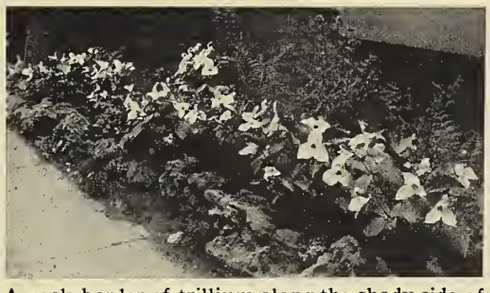
Happily, the round stone-wall abomination with *dry* pockets in which no respectable plant ever long survived, is of the past.

A shady corner allures the fern-grower and affords scope for a bewildering confusion of rock and fern. Individual grouping, as we often see in the open, has its merits, but an artistic sectional arrangement is better for limited space and may be as informal and picturesque as the ingenuity of the builder may suggest. Whatever the outline of the mass may be, unless in a very sheltered nook, the height should never exceed two and a half feet. No great expectations need be indulged for growth even at this height, for none of the large ferns which grow from a central crown can withstand the winds if isolated and elevated.

In building rock-work, it matters little what sort of soil is used for a foundation: if taken from stony waysides it need not be freed from minor cobbles; if from a rubbish heap, decaying vegetable matter must be removed, else the ultimate settling of the soil will cause trouble. In the construction of small rockeries part of the ground tier of stones may be laid and the filling piled high in the center, and either tamped or thoroughly wet down with the hose before the inside stones are placed—both are advisable.

Careful selection of stones gives varied outline; a curved slab of calcareous rock is highly valued, as decomposition is so far advanced that layers are easily sprung and rock-loving fern-roots inserted with perfect ease. The photograph of the structural foundation of a corner rock-garden, shaded by lilac shrubbery, draped with the American Woodbine on one side and by an eight-foot wire screen on the other, with a wire frieze across the front, both vine-laden, is shown here. The larger part of the rock-work is composed of an interesting lot of sand-rock or pudding-stone, which is strongly impregnated with lime. Quartz conglomerates are in the foreground. As this was an especially dry corner, after the ground was cleared the hose was turned on and the water allowed to play for hours before any filling was put in; this in turn was wet down in installments which thoroughly settled the soil and checked evaporation. The side slabs diverge from a beautiful central upright, and to insure the right slope the earth was piled much higher in the rear. Foundation stones were laid under the main divisions and cement used in a few points. Visible joints were quickly dusted over with coarse sand and pebbles inserted. Careful selection and grouping of material are necessary, for there is a difference in color, and wave of sandstone; an equally lovely stone may look like a new patch on an old garment and spoil the beauty of the whole. Room is left for massing tall ferns outside the walls. The large pockets are designed for vigorous growers, and this whole formation is full of snug retreats.

The successful culturist observes closely and follows Nature's lead. Failures are often due to deep planting, whereas the crowns should be carried above the surface. Another common mistake is in selecting plants from deep woods for a sunny location on the lawn. Many species have so wide a range that individual plants may be found growing in the same exposure to which they are to be subjected in cultivation.



A rock-border of trillium along the shady side of a house will give you a mass of white bloom where it will be fully appreciated

In rock-gardens variety of foliage is often more effective than color; even Jack-in-the-Pulpit (*Arisæma triphyllum*) may preach its gospel of good effect by contrast. Violets, white and blue, are wonderfully pretty with ferns, either as a footnote or shyly peering over the tip of the highest rock. A mass of the Foam Flower (*Tiarella cordifolia*) is especially pleasing. The rock-loving Columbine (*Aquilegia Canadensis*) loses none of its beauty if transplanted from Nature's rock-garden to ours. But the ideal accessory of ferns in rock-gardens is the Bluebell, Harebell or Bellflower (*Campanula rotundifolia*). Like a rare trait in a rough character they grace the rocks on which they grow. Just a foothold and the chance to swing and sway in the wind are all this flower of the air

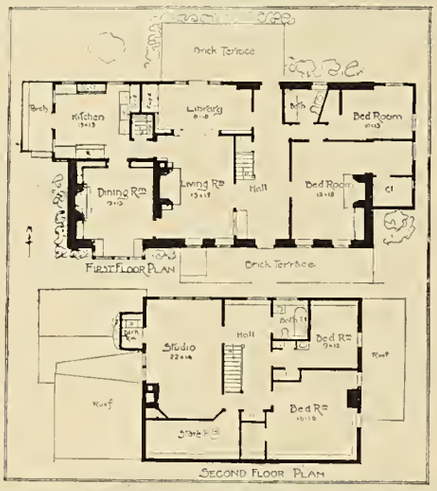
A formation for an artificial rock-garden, ready for the plants. Use only weather-beaten or disintegrating stone

(*Continued on page* xiv)

Mr. Gurd bought one of the comparatively few old Dutch Colonial stone houses in Northern New Jersey and is gradually remodeling it to conform to his needs

At the rear of the house the land drops sharply away, giving an opportunity for an open brick-paved terrace that is reached from the back end of the central hall

A view from the living-room into the central hall. At the right the partition is carried up only part way between the structural members, giving greater spaciousness to the interior



Because of the fact that most of these gambrel-roof houses were rather deficient in space on the second floor two of the bedrooms are located at one end of first floor

There is not much of the old-fashioned character retained in the kitchen, with its modern plumbing, heating, glazed built-in cupboard and even the electric bell annunciator

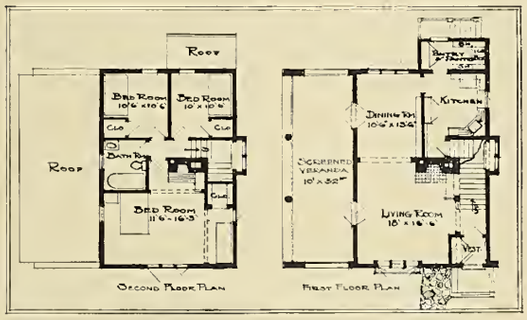
The front bedroom on the first floor has a fireplace faced with a beautiful white-painted mantel and a closet adjoining one jamb

In the living-room the large fireplace has a plastered facing without any mantel. The old structural ceiling beams, painted white, remain

THE HOME OF MR. JOHN A. GURD, ARCHITECT, RIVER EDGE, N. J.

All plaster houses have a great advantage over wooden ones in that the walls need not be painted. The vine coverings need never be disturbed

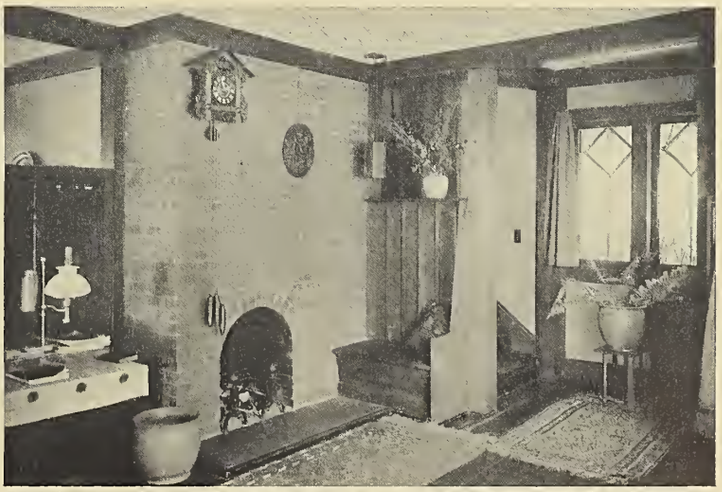
The main entrance is at one corner, marked by a simple hood and a small porch



The plans indicate how a spacious interior has been gained by having few rooms—the absolute essentials. One chimney serves the furnace and two fireplaces, gas being used for cooking

A covered veranda extends the whole length of one side, its roof supported by rough tree-trunk posts

Looking from the dining-room into the living-room. The leaded glass windows are very effective; on the outside these are protected by casements as shown above



Moldings and carved woodwork are conspicuous by their absence; instead, dark plain-surface woodwork is employed throughout to accent structural features

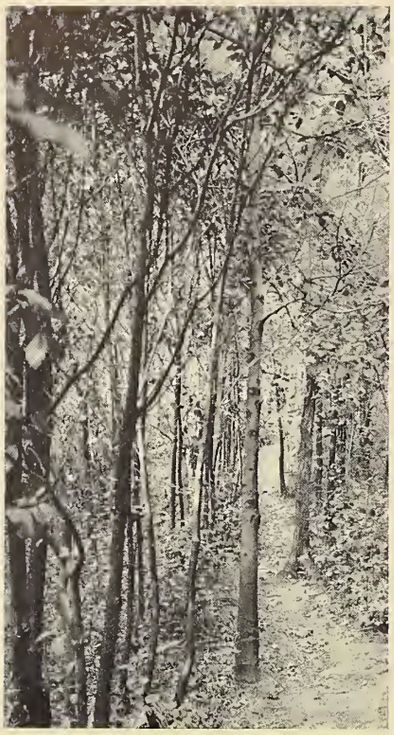
THE HOME OF MR. LAWRENCE BUCK, ARCHITECT, ROGERS PARK, CHICAGO, ILL.

Home Forestry in a Woodlot

BY J. J. LEVISON, M. F.,

Arboriculturist, Brooklyn Park Department

Photographs by U. S. Forest Service and others



A typical American woodlot badly in need of attention. Some of the weaklings should be cut out

A well kept forest of spruce in Austria-Hungary. Your woodlot may need planting as well as cutting

DID you ever realize how easily you can transform your woodlot from that neglected bit of wilderness to a thriving piece of natural forest that will add a charm to your country life and an increased value to your property?

To get a true idea of the conditions on your woodlot, it is quite essential that you look at it from the forester's point of view and you will then find a crowded mass of small, decrepit specimens unable to develop into beautiful stately trees for lack of light and space. A few trees might have grown to large size, but these are probably overtopping the rest, suppressing their growth and finally entirely destroying them. With a little more effort you will be sure to find some dead and dying trees, trees infested with injurious insects and fungi and any number of diseased stumps and branches.

As time goes on, the woodlot deteriorates more and more. The dead trees become breeding places for insects and disease; the insects in the dying trees multiply and the disease spreads from tree to tree. The number of suppressed trees increases and the dominant or better trees, suffering for lack of growing space, become more lanky and thin, so that they are unable to stand upright if deprived of the support of their immediate neighbors.

You will now readily see that such woodlots require immediate attention. The remedies are simple and in general consist of two processes—intelligent cutting and proper planting.

IMPROVEMENT BY CUTTING

The cutting should include the removal of all the undesirable trees, leaving a clean stand of well selected specimens to thrive under the favorable influence of more light and growing space. Now this does not entail any of the expensive treatments often resorted to in the care of ornamental trees. This is merely a case of intelligent cutting. It might be advisable to have an expert mark the trees which are to be removed. But once the trees are marked, the rest is mechanical and success will then depend on the care with which the trees are removed, so as not to hurt the young trees that may be growing underneath the older ones. The marking can best be done in summer when the dead and live trees can be most easily distinguished from a distance and when the requisite growing space for each tree can be better judged from the density of the crowns. The cutting, however, can be done most advantageously in winter.

Immediately after cutting, the diseased and infested wood should be destroyed. The sound wood may be utilized for various purposes. The bigger logs may be sold to the local lumber dealers and the smaller material may be used for firewood. The remaining brush should be withdrawn from the woodlot to prevent fire from setting in during the dry summer months. But at no time should the leaf-mold be removed from the ground. These leaves improve the physical condition of the soil and after remaining on the ground for about five years, decompose and through the soil return to the trees some of the most important ingredients essential to forest vegetation.

In marking trees for removal, there are a number of considerations to bear in mind besides the elimination of dead, diseased and suppressed trees. When the marker gets among the crowding trees of equal height, he must select those that are most likely to grow into fine specimen trees and cut out all those that interfere with them. The selection must also favor trees which are best adapted to the local soil and climatic conditions and those which will add to the beauty of the place. In this respect the method of marking will be different from that used in practical forestry where the aim is to net the greatest profit from the timber. In pure forestry practice, one sees no value in such species as dogwood, ironwood, juneberry, sumac and sassafras, and will therefore never allow these to grow up in abundance and crowd out other trees of a higher market value. But in private work of this sort, such species add wonderful color and attractiveness to the forest scene, especially along the roads and paths, and should be favored as much as the other hardier trees. One must not mark too severely in one spot in order not to cause the soil to dry out from exposure to sun and wind. When the gaps between the trees are too large, the trees will grow slower and the trunks will become covered with numerous shoots or suckers which deprive the crowns of their necessary food and cause them to "die back." Where the trees are tall and slim or on short and steep hillsides, it is also important to be conservative in the marking in order not to expose the stand to the dangers of windfall. No fast rule can be laid down as to what would constitute a conservative percentage of trees to cut down. This depends entirely on the local conditions and on the exposure of the woodlot. But in general it is not well to remove more than twenty-per cent of the stand nor to repeat the cutting on the same spot oftener than once in five or six years. The first cutting will, of course, be the heaviest and all subsequent cuttings will become lighter and lighter until the woodlot is put in good growing condition.

IMPROVEMENT BY PLANTING

But even where the trees are in good growing condition they cannot last forever, and provision must be made to have others take their place when they are dead. The majority of our woodlots are not provided with a sufficient undergrowth of desirable trees

(*Continued on page* xv)

Ingenious Devices

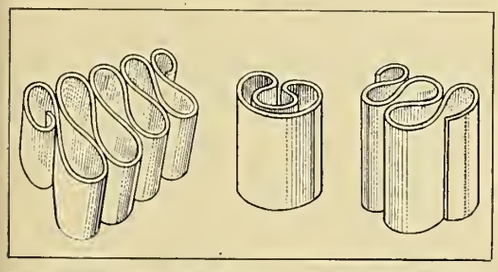
Labor-saving Schemes and Short Cuts in the House and in the Garden

Garden Watering

YEAR before last during a prolonged drought we watered our garden every night by hose sprinkling, but as the garden is a large one we found, the next year, that our plants thrived much better and revived more quickly when we thoroughly watered a single section of it one evening and another section the next. In this way we demonstrated to our satisfaction that it is better to give every plant a sufficient satisfying drink once every so often than to give every plant merely a half watering every night. We are little more than beginners in gardening, but this hint may prove of service to other beginners. W. P.

Flower Holders

AN excellent substitute for the Japanese flower holders for keeping iris, narcissi, daffodils and other bulb flowers upright in a shallow earthenware dish may be had by taking flat ribbons of lead about an inch wide which your plumber can supply and twisting them



Buy some strip lead from your plumber, and twist it into such forms as these for convenient flower holders

into shapes to hold the stems. The weight of the lead will hold these forms in place when they are laid edge down. Here is a diagram sketch to show how they may be bent. F. T

The Garden Herbarium

LAST year I made a collection of specimens of all the flowering plants in our garden, which I carefully pressed, arranged, and mounted on uniformly sized sheets of thick white mounting board. Then I carefully labeled each specimen with botanical and common garden names in the lower left-hand corner. In the upper left-hand corner I mounted specimen seeds, and in the upper right-hand corner I indicated by a space one inch square the color of the flowers as nearly as possible by a wash of water-color. Then in the lower right-hand corner I put a memorandum of the date of planting, the date of the first appearance of the seedling above ground, the date of flowering, and the date of seed maturity. This was less work by far than the telling of it seems, and as my entire collection fit nicely into a library

Here is an automatic chicken-feeder to save corn. The hopper drops kernels when the chickens peck at the hanging dummy ear

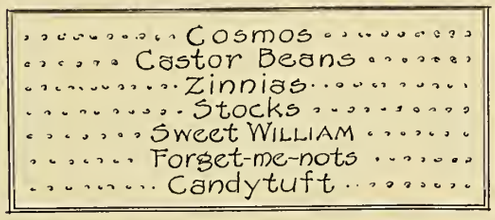
pamphlet case, you will see that I had an invaluable record of my flower-garden. Indeed my neighbors have consulted it freely in planning this winter for next season's gardens, and perhaps some of HOUSE & GARDEN's subscribers would like to try something like it themselves. M. S. J.

A Handy Remedy for Rattling Windows

DO not allow yourself to be made wakeful and nervous by rattling windows or doors when the comb on your dresser makes a perfect wedge, easily inserted and as easily removed. Especially annoying are such noises in hotels or other strange bedrooms, but even there the comb is at hand and equal to all sizes of cracks. L. McC.

Plan for Hotbed Growth

I HAVE often observed that beginners plant in hotbeds with little reference to the heights of various plants. When I start my hotbed planting I



In sowing seeds in the hotbed, plan to have the taller-growing plants at the higher end of the bed

always make a diagram of the seed positions. In this way there can be no mistake, and tall seedlings will not push up against the low front top of the sash nor low seedlings become lost in their shade at the back of the bed. The following diagram will indicate what is meant.

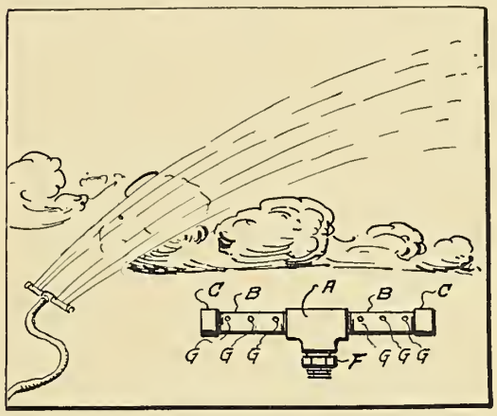
W. T.

Testing Seed Germination

A HOME-MADE seed tester may be made by taking a couple of soup-plates, some sand and two sheets of blotting-paper the size of the plates. Put sand in each plate to the level of its edge, wet till thoroughly saturated, place one sheet of blotting paper over it. Then a dozen or more seeds are placed on top of the blotting paper and the second cover put over them with a little sand sprinkled over that and the whole carefully covered with the second plate. Keep at a temperature of 50° to 60° day and 40° to 50° night temperature for tests of cabbage, beet, pea, onion, and radish seed; and 70° to 80° day and 60° to 70° night temperature for corn, bean, pepper, and cucumber seeds. E. D. R.

A Home-made Lawn Sprinkler

THE accompanying diagram illustrates the essential points of a lawn sprinkler that not only is cheap, but economical in water besides, and you can



An adjustable lawn sprinkler that can be approached and moved about without turning off the water

make it from a few pipe fittings in no time.

In the diagram A indicates a $\frac{1}{2}$ or $\frac{3}{4}$ in. gas pipe tee, according to the size of hose used; B, nipples of gas pipe 6 in. long; C, cup for gas pipe; F, hose coupling; G, air holes, drilled into the nipples BB, three in each, and not more than 1–16 in. in diameter.

In putting this together do not screw the nipples BB very tight into the tee A — this allows the row of holes to be turned at any angle. Likewise with the cups C, as the holes may become clogged and need cleaning. You will notice that you can easily get the necessary fittings at any plumbing shop and in most places of this kind they will drill the holes for you; other than this there is no labor. You will also note how one can walk right up behind the spray and move it from place to place. I have used two of these devices for the past two years and they work splendidly.

THEO. L. VALERIUS.

Inside the House

Edited by Margaret Greenleaf

The Editor will gladly answer queries pertaining to individual problems of interior decoration and furnishing. When an immediate reply is desired, please enclose a self-addressed stamped envelope

Colonial Bedroom Fittings

THERE is this season a decided interest manifested in the fittings for Colonial bed-chambers. Some charming examples of the quaintly figured papers, chintzes and cotton prints of that period are prominently displayed in some of the leading shops. A number of these shops specialize on assembling wall covering, drapery materials, furniture and floor coverings which will be used together, thus giving the most inexperienced customer a comprehensive idea of the completed room.

A particularly interesting effect is shown where the strong blue and white of the hand-woven bedcover of Colonial times is made the color motif for the decorative scheme of the room. Here for the wall covering a striped paper in two tones of oyster white is exhibited, divided in large panels by a conventional border of blue leaves on white ground. Glazed chintz showing similar design and color, is used for pillows and slip cover for the large wing chair which is a feature of the room.

The mahogany furniture consists of reproductions along correct Sheraton lines and the floor covering shown is a closely woven blue-and-white rag rug of the "hit-and-miss" pattern. The woodwork of the room is purely white, as is the ceiling and the tamboured muslin curtains. The effect is fresh and dainty and sufficiently unusual to be interesting.

Other papers suggested for Colonial bedrooms show on a glazed background a small all-over pattern of closely set dots, intersected at intervals by a tiny yellow rose and single leaf. This design also comes in pink and a deeper rose as well.

Others, carrying a suggestion of French Colonial, show formal baskets of flowers or garlands held by bow knots of ribbon. With such papers plain-colored draperies of linen, chambray, dimity, or thin silk are advised. Except in the last-named fabric a border or corner motif, showing the same design and color as the wall paper, may be appliqued to give a decorative touch. One often finds even in such inexpensive materials as art ticking which sells for 25 cents a yard—lovely effects for this purpose. This material frequently shows two floral stripes alternating, and when cut apart will supply borders for curtains, bedcovers, etc., for two bedrooms.

Colonial Lamps

WILL HOUSE & GARDEN give me a suggestion for the proper style of lamp to use in the living-room of a Colonial house? I know that it is very necessary to select the correct thing, and will be very much obliged for any suggestions you may offer.

The photograph here reproduced will show you lamps of Colonial type. The shades are particularly good and can be used on lamps less high than the ones shown in the photograph. Also they are frequently used where the crystal prisms decorate the stand of the lamp.

For the living-room furnished along Colonial lines there are modern lamps made for using electricity, gas and oil

Desk Sets

SOME of the shops are showing very attractive desk sets, all of the pieces covered with quaint brocade and finished with a narrow dull galloon. These sets include the pad, the letter-rack, the hand blotter, the letter scale, the pen tray—glass lined, and several smaller pieces, and sell for $25.

To complete a desk in a room furnished in Colonial or French style, these find their proper setting, or if they are made from a Venetian brocade of two tones in dull mulberry red, Gobelin blue, or yellow, the set will be appropriate in a library where the paneling is of oak and the furniture on Italian or Jacobean lines, wherein the more delicate brocades above referred to would be wholly out of place.

Curtains for Casement Windows

WILL you give me some directions as to the proper way to make and hang curtains for casement windows? These windows swing in and I find the question difficult to work out for myself.

The brass rods holding the net curtains for casement windows should be set on either side of the window frame so that the curtains will swing with the window. These curtains should be run on the brass rod by a narrow casing at the top, without frill, and finish in exact line with the window frame. For over-draperies an extension rod can be used, set on the window trim at the outer edge. On this the heavier material—silk, casement cloth, or whatever goods is selected—may run. These curtains should extend to the sill line, and finish with a 2½-inch hem. A valance may be used if the window is very wide and the room is suitably furnished for this treatment; the valance should not be more than eight inches in depth.

Porch Furnishing

IT is interesting to note the growing enthusiasm of Americans as a nation for out-of-door living. While this is a comparatively recent development, it has evidently come to stay. The conditions which prevail to-day are in striking contrast with those of a few years ago when the narrow and restricted porch, which was all that the average house afforded, held during the summer months two or more weather-beaten and uninviting looking chairs which were rarely occupied.

Now even the simplest and smallest house has its porch and veranda of generous dimensions. These are often screened and fitted as living-room or dining-room for the summer months, and upper porches, even during the cold weather, are frequently arranged as sleeping-rooms.

Therefore to find the right furniture for the porch is a matter of interest, and the manufacturers are meeting these recent requirements with some attractive and well built wicker furniture. (See Miss Birdsall's article on another page.)

Rugs are an essential part of porch furnishing, and these may show stronger colors and coarser weaves than those used in the house. The woven grass or matting rug is very satisfactory for porch use. Well cushioned canvas hammocks or swinging seats are delightful and desirable adjuncts to such furnishing.

Awnings or the split bamboo curtains which roll readily will be required where the porch is to be used as a living-room, as at some hour of the day it will be found necessary to shut out the too strong rays of the sun. Fern balls and hanging baskets, as well as growing ferns and palms, can be decoratively introduced.

For the porch floor woven grass or matting rugs are very serviceable. Stronger colors and patterns will be needed outdoors

Protecting Enamel Tubs

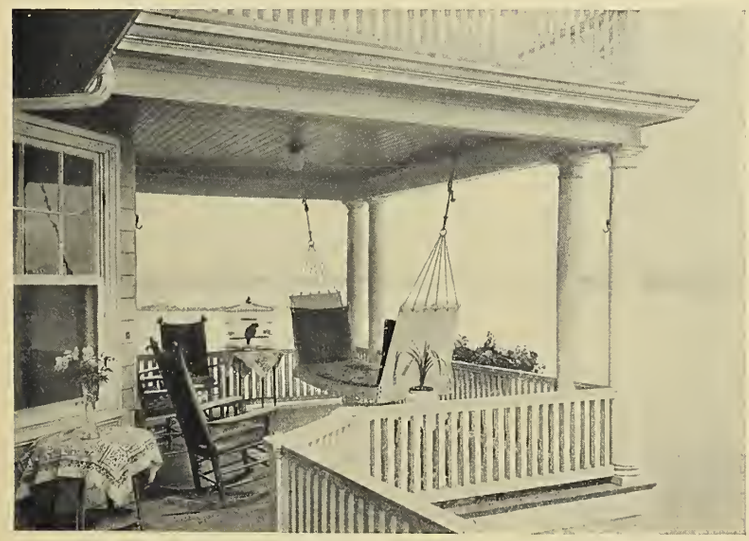
THE new porcelain enameled bath tubs which one finds so much used these days usually have a nickel-plated soap dish attached to them by two flexible metal bands. This allows them to be removed for cleaning. But the use of a dish so equipped leaves a mark from the bands on the enameled surface. I prevented this by the use of ordinary rubber bands. We also had a seat for use in the bath-tub, and here again the metal rods used in its construction rubbed the enameled surface, until I obtained some rubber tubing and easily and quickly covered them.

C. K. F

A Formal Room Problem

HOUSE & GARDEN has previously helped me in solving a difficult problem in fitting up my dining-room; now I need help in my parlor. This room is really a parlor and not a living-room, as it is chiefly used on formal occasions, but it looks so appallingly formal that I cannot bear to sit in it. I thought when I furnished it I wanted it in tones of gray, and bought an upper-third wall covering (the lower wall is paneled with wood), a scenic paper showing a line of gray trees with a roadway stretching between them. I had the woodwork given a coat of gray paint, and this is one great trouble. In tone it is yellow more than gray and the paper is bluish gray. My curtains are on the shades of the paper and the fabric is two-tone linen and silk damask. Unfortunately the net curtains, now that they are in place, seem almost tan in color. The carpet is blue and dark green with a little black, very small figures. The furniture is old mahogany of good form covered in black haircloth. The table has a marble top. Now what can I do to make this room more cheerful and inviting, as it is anything but that at present?

The first change to make is in your woodwork. This should be given a finish of white enamel—purely white, not blue white or ivory. In tone you will find this will bring out the best qualities in the color scheme. The ceiling should be the same shade of white and the curtains next the glass also white. White point d'esprit net would look well for this. You might leave the straight chairs in your room with seats covered with the black haircloth, but for the other pieces we would advise a covering of tapestry, showing dull blue, green and smoke gray tones. A table cover cut exactly the size and shape of your marble top could be made from a good piece of brocade with blue and old rose shades predominating, the edge to be finished with a narrow gold galloon. A wing chair covered with blue cut velvet would make a good spot of color in the room and such a chair is always useful and ornamental. We think with these changes you will find that while the room is still formal, it will be attractive and livable.



The new type of canvas hammocks or swinging seats help to furnish a porch

Mosquito Netting

FEW people know, when buying wire netting for mosquito frames, that it is sold with different sizes of mesh. The writer finds now that some is sold with such a large mesh that the small mosquitoes can enter through it. Look out for this when purchasing. C. K. F.

A Splendid Polish For Wood Or Iron

A CHEAP but most excellent polish for stained floors, furniture, or woodwork of any kind, and also for stoves or iron fixtures, is a mixture of linseed oil and benzine in equal parts. Put it on with a soft cloth, and rub dry immediately with another soft cloth. It not only polishes but cleanses and removes spots.

A quart of this mixture costs but ten cents, and the oftener it is used upon a stained floor the better. It made my old grate seem like new, and left a rusty stove quite presentable. Upon fine furniture but little should be used at a time and that rubbed in immediately, though there is nothing harmful about it. *Remember that the mixture is inflammable.*

L. McC.

Garden Suggestions and Queries

Edited By Gardner Teall

The Editor will be glad to answer subscribers' queries pertaining to individual problems connected with the garden and grounds. When a direct personal reply is desired, please enclose a self-addressed stamped envelope.

May Time

THIS is the month of the poets, the Queen of the Calendar. But it is none the less the month which brings happiness and inspiration to the practical as well. Nature, dear old nurse to many of our happiest hours, has brought us to the threshold of Summer's hospitable mansion, and whispers to us of all the unfolding beauties that heaven is to spread before us. The orchards will be pink and white with a thousand fragrant temptations for the tuneful birds and the buzzing bees, the Iris will be unfurling its bannerets of royal purple, snow white and golden yellow, and at last we shall forget that Jack Frost ever tried our patience with his wintry pranks.

Things to Remember in May

Be prepared against late frosts but do not rush the season, though you should plan not to be behindhand with anything. When all danger from frost is past transplant your tender flowers and vegetables from hotbed to garden.

The Iris will be unfurling its bannerets

Look out for cut-worms that will be appearing in your garden soon. Dig them up and kill them as soon as you find any of your young plants dying without any apparent reason. Cut-worms are probably chewing at the roots.

This is a good time to think about flower-boxes for porch and windows.

Carnations may be taken from the greenhouse for outdoor planting the latter part of the month.

Plant Sunflowers, if only for the sake of such useful birds as the Goldfinch and Nuthatch.

Now is the time to plant hardy border plants, Alpines, Climbers, and especially Gladioli, Gaillardias, Pyrethrums (cut back for late flowering), Delphiniums (cut back for late flowering), Geraniums, Chrysanthemums, Hollyhocks, Clematises, Ivies, Passion Flowers, Dahlias, Calceolarias, Phloxes, Pentstemons, Cannas. Also Potatoes, Broccoli, Brussels Sprouts, Celery and Lettuce.

Remember to spray your orchard trees as soon as the petals fall from the blossoms.

The middle of the month is the time to spray your rose bushes with whale-oil soap, and the last week in May they should receive liquid manurial stimulant.

Mulch your strawberries just before they bloom.

Now is the time to sow everything required for succession, late Peas, Beans, Cabbage for late use, Cucumber, Radish, late Broccoli, Winter Kale, Vegetable Marrow, Brussels Sprouts, Horn Carrot and Main Crop Carrots, Spinach, Turnip, Beet, Parsley, Colewort, Onion, Lettuce, Cauliflower, Parsnip, Ridge Cucumber. Also Phlox Drummondii, Marigold, Calceolaria, Ten-week Stock, Cineraria, Primula, Ornamental Grasses, Grass Seed and Aster.

Sow all hardy annuals and transplant such as you have had started in coldframes in March, which have been hardened off. It is not too late to sow tender annuals in coldframes for later transplanting.

Shift perennials, and rearrange border plants. This can be done with safety by the end of the month.

Gladioli planted this month will bloom in August.

When Small Fruits and Trees Bear

HOW long should it take the Blackberry, Currant, Gooseberry, Raspberry, Quince, Plum and Strawberry plants I set out last season to bear?

Blackberries, Currants, Gooseberries, Raspberries, and Strawberries should yield fruit one year from setting, and bear good crops in from two to three. It will take the Quince two years, and the Plum three years from setting to bear.

The Eggplant (*Solanum Melongena*)

Tomato vines trained against the house, wall, or trellis yield fine fruit

Tomato Culture

IF you have only a small space in your garden for Tomatoes plan to place them where they may be grown against an upright trellis, a wall, a fence or against posts. This new mode of culture is more productive to each plant than any other.

Eggplant

LAST year I had no success in my attempts to raise Eggplant, and I shall be greatly obliged if HOUSE & GARDEN can give me some hints on setting out, soil, fertilizing, culture, etc. As our plants were insect ridden will you also tell me what precautionary measures should be taken against a reoccurrence of this.

As the Eggplant (*Solanum Melongena*) is an extremely tender annual, it is seldom cultivated north of Philadelphia, and must be started under glass except in the South. Dwarf varieties are to be recommended for short seasons. A well drained, loose sandy loam, very rich and quick, and a sunny exposure are required for satisfactory results. Two or three fruits to each vine form a good yield. Plant out, when a foot or more in height and well hardened off, the second week in June, three feet apart in hills into each of which compost, and a fertilizer of four per cent nitrogen, eight per cent phosphoric acid, ten per cent potash have been forked. After setting, fertilize further by the application of a liquid manurial stimulant. The chief diseases to which the Eggplant is subject are leaf-blight and blight-fungus. It is difficult to meet this, but with the former destroy any infection-carrying insects and spray with Bordeaux mixture, and with the latter disease destroy affected plants before they spread their contagion. Against Aphis spray with kerosene emulsion.

Window Light

WE have just moved into a three-story house and as there are large bay windows on the southern and western sides of the house we are anxious to try our luck at window-gardening. Which of the windows should we choose? We wish to confine our house-plants to one room.

The southern window is an ideal position, although you should anticipate the glare of even winter's mid-day suns by planning for adjustable shades. Although an abundance of light is necessary to success with most house-plants, the mid-day sun may prove too strong for "resting" plants. Palms and ferns will require such protection when the sun is high.

Number of Plants Required

WILL you please tell me how one may know the number of plants required to the acre?

Multiply the distance apart (in feet, or fractions thereof) at which a plant is to be placed from each of two other plants at right angles to it, and divide the number of square feet an acre contains (43,560) by the product thereof. Thus, if Strawberry plants were to be placed two feet apart each way your problem would be $43{,}560 \div (2 \times 2) = 10{,}890$ plants required; or if they were planted two feet apart in rows three feet apart your problem would be $43{,}560 \div (2 \times 3) = 7{,}260$ plants.

Tar Paper

I HAVE been told that tar paper is good to wrap around the trunks of insect-infested trees to keep pests away. How should I go about this?

If tar paper is used at all it must not be fitted *tightly* around tree-trunks, and in any event it should be removed before warm weather. Though it is sometimes recommended for use to prevent the attack of such insects as the borer, one should dispense with it when possible, as it also is extremely liable to injure the trees it is supposed to protect.

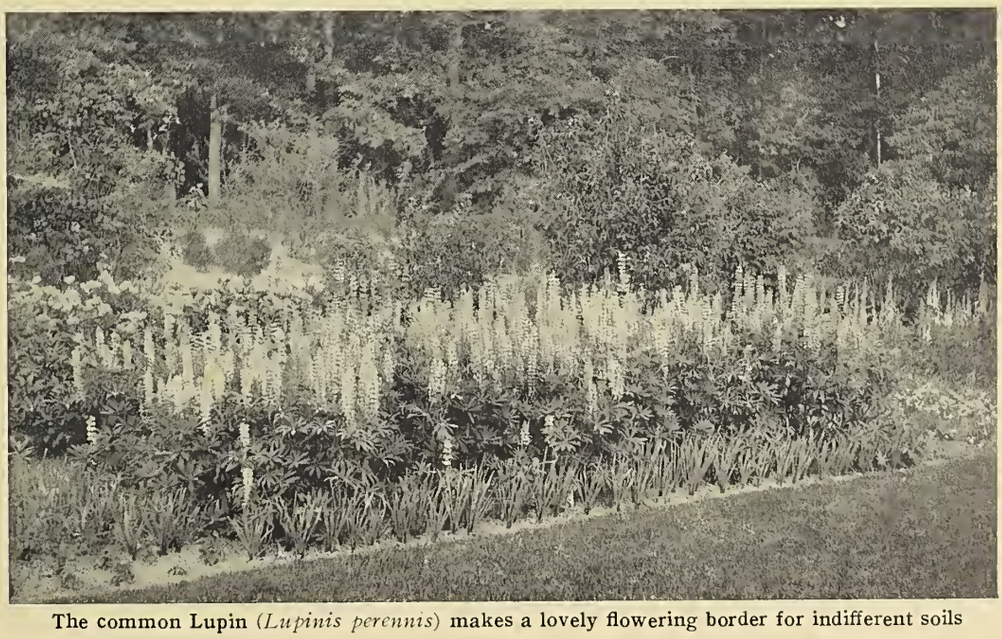
Plant Sunflowers that their seed may divert birds from garden fruits

Remember that just after they finish blooming is the time to prune all spring-flowering shrubs.

Protecting Small Fruits

LAST year we lost a great many berries from our bushes through depredations of birds. This year we want to anticipate the nuisance. Can you suggest a way to prevent it?

One of the simplest solutions to the problem of bird invasions is to cover the bushes with mosquito-netting. It will not prove expensive where the garden owner has but a few bushes of small fruits.



The common Lupin (*Lupinis perennis*) makes a lovely flowering border for indifferent soils

Fertilizers

The purpose of this page is to set forth in the most direct, non-technical form the fundamental principles of amateur gardening. Unlike the great mass of garden literature, it presupposes no knowledge of the subject, aiming to satisfy those who now for the first time want to know how to make things grow. The Editor will welcome any questions from beginners and will print in these columns the experience of contributors when they seem to have a wide appeal.

IT is astonishing that such a measure of good luck attends the guesses which most of us make at supplying the needs of the soil—or to be more exact, the needs of the plants which grow in the soil—because very few really know anything about it. But of course the makers of commercial fertilizers have helped us greatly, and there are many scientifically compounded and of real value, upon the market, every pound accompanied with directions for its application to the soil. What these compounds do, however, and why they do it, and why it needs doing are details of the matter that even very advanced gardeners do not trouble to concern themselves with—at least not often. The general idea is to make the soil "rich," and if one thing doesn't produce a crop luxuriant enough to indicate that this has been accomplished, something else is tried—something that is hit upon somehow, somewhere, that somebody says is good because it has benefited some other garden.

Of course everybody knows that the growth of a plant requires food just as much as the growth of a child or a bird or anything else in creation requires food. But the ideas about this food are very vague; "what plants eat" is an untold tale, mysterious, almost chimerical to the practical mind accustomed to *seeing* before believing. Let us see if we can't straighten this out a little and come to a real comprehension of plant feeding; then fertilizers will not seem so deadly dull and uninteresting and incomprehensible.

The food of plants consists of thirteen "chemical elements." Nine of these are taken by the plant directly from the soil—these are the pure mineral plant foods, three are taken from water and from air, and the thirteenth and last is taken principally from decaying organic matter in the soil.

In order to understand this quite clearly let us stop just here long enough to take a look at the second classification of soil as mentioned in a preceding instalment of the *Beginner's Garden*—that is, the chemical classification. Soil is made up of mineral matter and organic matter—two forms that are of course widely different—and to get at this composition of it in the simplest way possible we will follow the suggestion of one of the Department of Agriculture experts and magnify a cubic inch of soil, in the imagination, to a cubic mile—and then look it over. It becomes very vivid, and the processes going on in it are plainly revealed, under such examination.

It will look like a mass of rocks and stones varying from the size of a pea to boulders several feet in diameter. These are the mineral particles—in common parlance the "dirt"—which predominate and form the foundation of all soil. Among these rocks and stones, in many of their large and small interstices, will be decaying pieces of plant roots and stems and other organic matter which appear very much like logs and pieces of logs rotting among masses of rock and gravel. All of this organic substance will be dripping with water like a soaked sponge, while all the stones and rocks have a layer of water over their surfaces. And finally, in all the spaces where there is nothing else, there is air — indeed nearly half the volume of the whole cubic mile is air.

A plant root coming down into this magnified cubic inch of soil would be of course an enormous thing, pushing its way among the rocks and stones and decaying matter with a great, tireless, steady, resistless pressure that would move the biggest of them. Near the tip of this ever-extending and down-reaching growth, small hollow tubes—root hairs—would be seen reaching out and feeling this way and that, sucking the water from the surfaces of the rocks and from the dripping, spongy masses among them by drawing it through their thin and delicate walls.

In this water is the mineral food, dissolved off in the minutest particles from the "rocks"—and it is somewhat staggering to note, by the way, that in order to produce one pound of growth in dry matter—that is in branch and leaf, flower and fruit—*from* 300 *to* 800 *pounds of water* must be taken in by a plant's roots, drawn up through its stalks and branches, and discharged or "transpired" by its leaves! Think of the stupendous work being carried on by all the silent green things that we give scarce a thought to in the long, drowsy summer days.

All fertilizers present, in different forms, three essentials—phosphoric acid, potash and nitrogen. The latter is the last of those thirteen chemical elements mentioned which feed vegetation—the one which comes principally from decaying organic matter in the soil—and in some respects it is the most important of all. Unfortunately it is the one most easily lost through washing out, nitrates being very soluble, or exhausted in other ways; therefore it is the one which should be applied only in sufficient quantity for the immediate use of the plants to be grown, and just at the proper time for their needs. It is usually well to wait until they are above the ground.

Surplus phosphoric acid and potash, on the contrary, will usually remain in the soil until succeeding crops use them up, so it does not matter so much if these are applied in excess. They are not wasted.

What is known as a complete fertilizer is a combination of these three in the proportion generally of one part nitrogen, two parts phosphoric acid and two and one-half to three parts potash. Such a fertilizer will meet all the requirements of the average garden, especially if the soil is treated as directed in a previous number, with lime first. Lime is not a fertilizer in the strictest sense, but it sweetens the soil as well as helps to bring about physical and other changes that make plant food available.

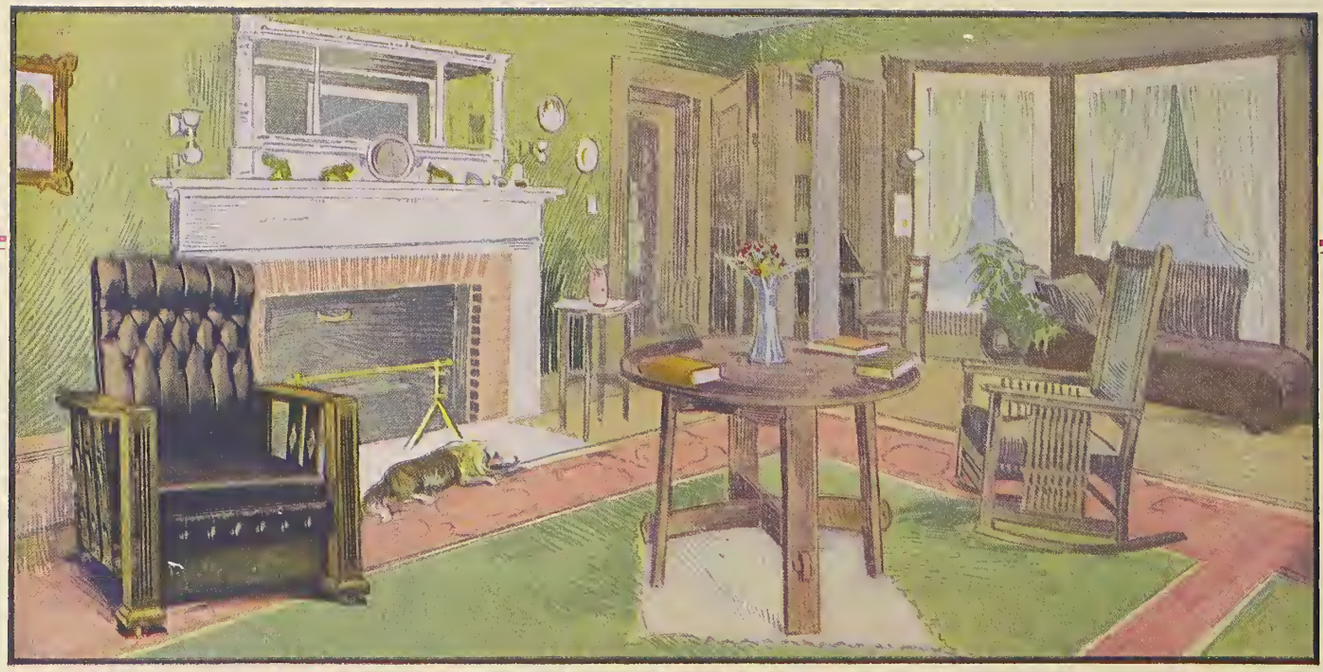
The sources of each of these three fertilizer ingredients are important to know and remember, for even though a complete commercial product that just suits one's garden is found, it is well to have an intelligent understanding of its composition. Many times the application of one of the three is all that is needed and where this is the case it is much better to use only the one—for gorging the soil is as bad as starving it.

Nitrogen is supplied by nitrate of soda, sulphate of ammonia, cotton-seed meal, high-grade dried blood, or green manuring (a leguminous crop such as cow peas, clover of all kinds, soy beans and others, grown and plowed under), and by stable

(*Continued on page* xvii)

E.M.F. "30"

Today there are over ten thousand E.M.F. "30" cars on the roads in hands of owners and every owner is boosting. That is why the demand for this car always exceeds the supply.



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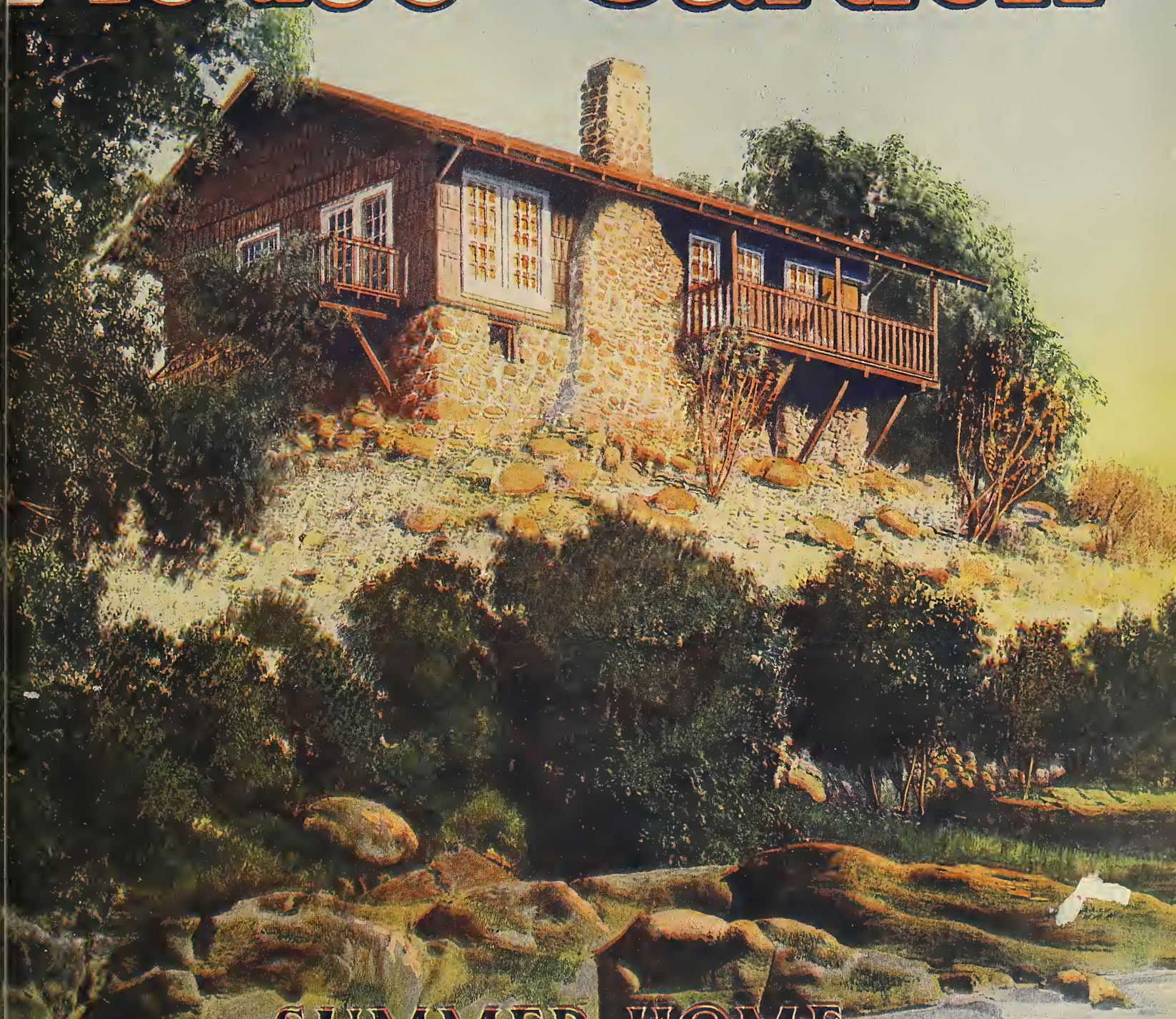
100 IDEAS FOR SUMMER HOMES
Building—Furnishing—Planting—Converting Old Farmhouses into Country Homes—Bungalows

25¢ A COPY

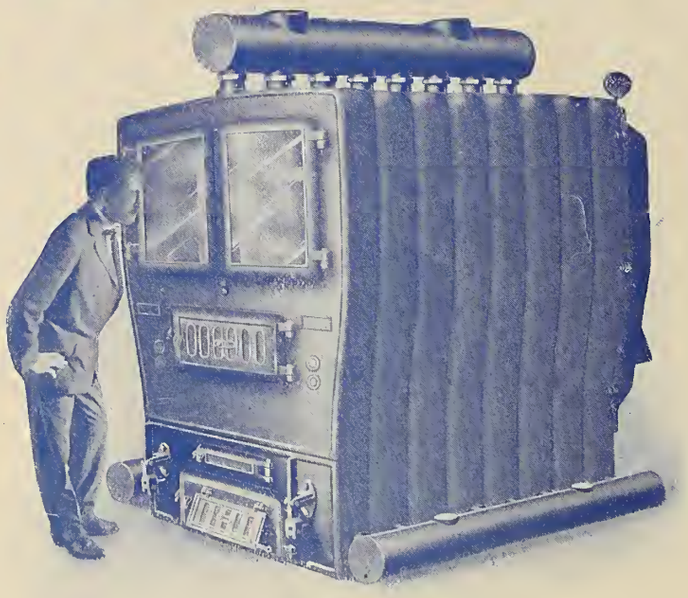
House & Garden



SUMMER HOME NUMBER

McBRIDE WINSTON & CO.
449 FOURTH AVE., NEW YORK

We Built a Boiler With Windows in It



We learned by experiment that some boilers get twice the heat out of a ton of coal that others get. It is largely a matter of harnessing the fire and getting the most out of it while it is still hot.

So, to be beyond theory, beyond guesswork, we built a boiler with windows in it.

Through these windows we proved our experiments and perfected the new "RICHMOND" which, in actual practice, develops *double* the efficiency of ordinary boilers. And the day-after-day saving in coal will prove this to you, just as the windows proved it to us.

"RICHMOND"

Boilers — Radiators

By building a boiler with windows in it, we learned *certainly* about drafts, water circulation and fire travel which enabled us to perfect a heating system which doubles efficiency and halves the fuel bill.

We found, through the windows, that the flue is more important than other makers dream.

So, by patient experiment, we perfected a "diving flue" which costs us three to seven times as much as other makers spend for smoke connections and makes it that much more efficient.

The "RICHMOND" "diving flue" takes the gases and smoke which would ordinarily pass up the chimney and sends them back, mixed with fresh oxygen, to burn anew.

For every shovel of coal you put in the firebox this "diving flue" sends half a shovel back from the chimney.

The "Diving Flue"

The "diving flue" is our own invention. It is exclusive. It can be found on no boiler save the "RICHMOND"

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Contents—June, 1910

HENRY H. SAYLOR, EDITOR

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THE BUNGALOW OF MR. HARRY GILLETT, GATES MILL, OHIO. W. Stillman Dutton, architect

The horizontal lines of both side walls and roof have been accented by doubling the shingle courses. The balcony at the near end makes an ideal sleeping porch. Three thousand dollars covered the cost

House & Garden

VOLUME XVII June, 1910 NUMBER 6

A bungalow at South Pasadena, Cal., built of redwood shingles and brick that is interspersed with clinkers. The floor plan appears below. Lester S. Moore, architect

All Types of Bungalows

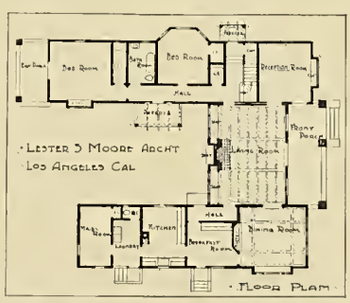
WHAT THIS MUCH MISUSED TERM REALLY MEANS—THE POSSIBILITIES OF THE TYPE FOR SUMMER HOMES, AND ITS LIMITATIONS

BY RUSSELL FISHER

Photographs by W. L. Burn, Gabriel Moulin and others

THE term "Bungalow" provides a curious example of how we Americans overwork a word that is euphonious and the meaning of which, because of the word's comparatively recent assimilation into the language, is somewhat uncertain. One hears nearly every type of country or suburban home called a bungalow, provided only that the house is somewhat informal or picturesque in its lines. Someone has facetiously remarked that in the new dictionaries a bungalow should be defined as "a house that looks as if it had been built for less money than it actually cost."

It seems worth while, in view of the popular misconception of the word's actual significance, to look into its derivation with the purpose of finding out just when it may properly be applied and when it is a misnomer.



Broad windows in the living-room give a view over the patio

According to the authorities, a bungalow is "a Bengalese house," but it is not the typical native's home in India. These are of an entirely different type from our conception of the word. The only bungalows to be seen in India are the "Rest houses," erected by the English government along the main roads of travel. These are inns or hotels, consisting of a large central building divided in the middle by a hall separating large rooms, with a kitchen in a separate building that is reached through a covered passageway. In these Rest houses the bedrooms are in still another adjoining structure, always a long low building with the bed-chambers opening upon a straight corridor. A low, rambling mass, with wide verandas, overhanging eaves, floors of stone or concrete and single-story construction, are the characteristics of

The rather high two-story rear wing of the bungalow shown on the preceding page robs it of the right to the title

White enameled wainscoting and an unusual type of built-in buffet are found in the dining room

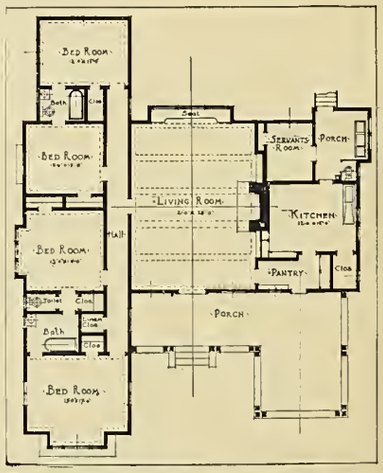
the true Indian bungalow. There is never a second story, never dormer windows to break the long simple roof planes that appear to come down, particularly at the ends or corners, nearly to the ground.

In adapting this type of building to our own needs we realize at the very outset that there are two forces working against the adoption of the true bungalow characteristics. One of these is the element of cost; a building with all its rooms upon the ground floor is the most expensive kind to build. There is more wall surface and roof area in proportion to the enclosed space than in a building of two or more stories. Then, too, there is a common prejudice against having our bedrooms on the ground level, particularly since we do not have to contend with the burning heat of India. There the deep air space enclosed in the roof above low ceilings is a necessary protection against the sun. With us the air space above even the second-story rooms is sufficient for protective purposes, this being about six or eight feet high in a bungalow that is twenty-five or thirty feet wide. When we meet the problem of lighting and ventilating these bedrooms, however, the main difficulty of adapting the bungalow type becomes apparent. With the addition of dormer windows the attractive simplicity of the roof is at once spoiled. To secure head-room in the bedrooms the whole roof must be raised, and with this change the building loses at once its similarity to the real bungalow. So if we are to be free to call our summer home a bungalow it should have all of its rooms on the ground floor.

An interesting shingled bungalow at Belle Terre, Long Island, the plan of which is shown at the right. Aymar Embury, architect

By reason of the sloping site a laundry was built under a rear corner

A shingled bungalow at Burlingame, Cal. (plan at right), which cost, with barn and outbuildings, $10,500. Sylvain Schnaittacher, architect



The central living-room type with a bath to each two bedrooms

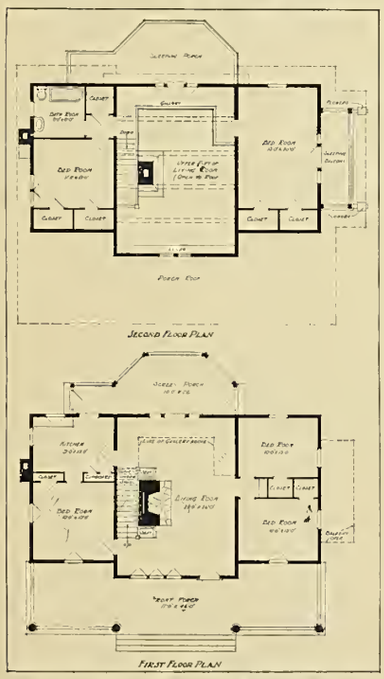
Granting, then, that our bungalow shall be a one-story affair—or at least that any space on an upper floor shall be of minor importance, without the necessity for much outside light, let us look into the matter of planning the main floor. Simple as a bungalow appears outwardly, an economical arrangement of living-room, dining-room, service and bedrooms, with means of ready intercommunication, is not easily accomplished. The first rough draft of our floor plan will probably reveal the fact that we are wasting twenty-five per cent. of the whole area in hall space. As has been said above, the true Indian bungalow usually has its

A mid-western type of plaster and shingles built by Tallmadge & Watson, architects, at Oak Park, Ill.

The living-room is found in the projecting wing shown at the right of the adjoining illustration

bedrooms strung along a long straight corridor. While that is to be expected in a hotel, it is assuredly not desirable in a private dwelling. It is a difficult matter to lay down any hard-and-fast rules for bungalow planning, but I think it will usually be found that an arrangement providing for a large living-room or hall extending through the middle of the building from front to rear, from which open at both sides the bedrooms and dining-room, with the kitchen and service portion extending out beyond the latter, will form an excellent basis upon which to develop the final layout. With this scheme the bathroom, or bathrooms, may offer some difficulty, though these may probably be planned to come between two adjacent bedrooms, opening into each.

A plan that is remarkable for the small amount of hall space



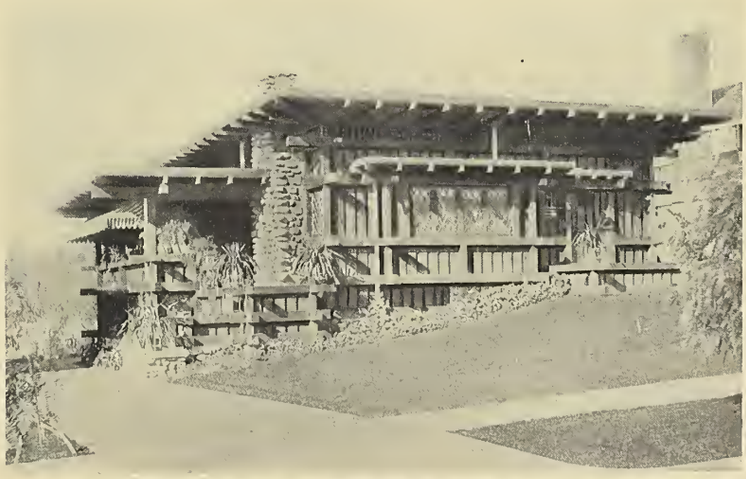
Plans of the $3000 bungalow at Berkeley, Cal., illustrated in the frontispiece

The piazza, of course, is one of the essentials, but it will be well to provide for this so that it will not darken too much of the interior. Usually there is no great objection in having it cross the bedroom windows, since these rooms are not required to be so bright. In the typical arrangement that has been suggested, the piazza could be carried across the entire front or rear, as the exigencies of the land may require, its roof being broken, in the space adjoining the living-room, by a section of uncovered rafters in a sort of pergola motive, upon which not-too-enthusiastic vines may be allowed to climb.

As to the materials of which the bungalow shall be built, there is a fairly wide choice — shingles, cement, field-stone, logs, slabs on an ordinary stud frame, or even common rough boards, overlapping if nailed horizontally to the framework, or battened with narrow strips if put on vertically from sill to roof-plate.

Logs, while undoubtedly picturesque and harmonious with the informal character of the building, are usually unsatisfactory. Their use requires skilled and experienced labor, and even when well put together, they are apt to give trouble after a year or so, through the visitation of borers that get under the bark and start decay. Slabs, which are the first cuts from the four sides of a log, are usually obtainable at a very low cost if there is a saw-

An interesting combination of brick piers and plaster on wood frame, at Belle Terre, L. I. Aymar Embury, architect



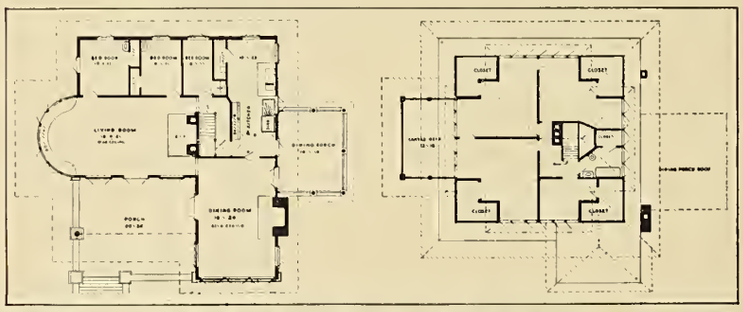
A western coast bungalow that displays a remarkably daring utilization of modified Japanese motives

An exceptionally effective and simple clapboard bungalow in a typically luxuriant California setting

Mr. H. M. Stewart's bungalow, Liberty, N. Y., cost $1700 in 1904. Fred Wesley Wentworth, architect

mill within convenient reach. These are nailed to the outside of a common stud frame, horizontally, the width of the "chinks" between adjacent slabs being kept fairly narrow by alternating the butt ends. If the studding is to be sheathed on the inside there need be no attempt to caulk these chinks tightly, but if no inside finish is planned, the wall can be made reasonably tight by putting the slabs on a preliminary outside sheathing of the roughest sort of unplaned boards. These, of course, should run at right angles to the length of the slabs. Still another method of making tight a slab wall was described in HOUSE AND GARDEN for January, 1910, in which instance strips of wire mesh were tacked over the backs of the joints to support a caulking of cement-and-hair mortar. The inside of the studding was then covered with a slab wainscot of birch with a rough fabric, such as burlap, above it.

"Cobble Villa," Belle Terre, L. I., Henry B. Moore, architect and owner. The plans are illustrated to the right

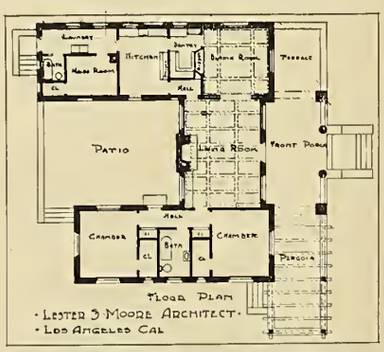


The dining-porch on the first floor, and the pergola sleeping-porch opening from the two main bedrooms, are noteworthy

An adobe bungalow at San Marino, Cal., that suggests the Spanish Missions. Lester S. Moore, architect

Shingles, siding or rough boarding offer no special difficulties in construction, and these materials may either be left to weather to a silvery gray or stained with one of the readily obtainable shingle stains.

When we come to the matter of the inside finish, there is opened up a great field for the expression of individuality. Even though the bungalow must be kept down to the bare essentials, with no covering at all for the stud frame, there is an opportunity for avoiding the commonplace merely in the carefully studied spacing of the studs or upright members. Do not be content to have these appear just as the carpenter finds it convenient to place them; have them symmetrically spaced on either side of center openings, with the horizontal member forming the window-sills carried all the way



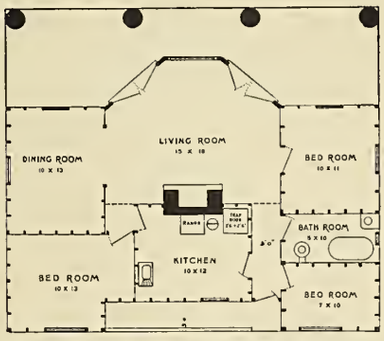
The plan of the bungalow illustrated to the left, built around a patio

around. Then, too, if the slight additional expense be permitted, the studding may be covered with pulp-board or compo-board, a comparatively thin but rigid material that may be painted or, better still, covered with a rough fabric in cool gray, apple green or a pleasing shade of brown.

If the bungalow walls are built of one of the more substantial materials, such as cement, there are great possibilities in working out interesting surface textures for the interior, with the use of inset tiles to gain the desired spots of color.

No bungalow is worthy of the name without at least one big fireplace for the living-room, and if additional ones may be built in the bedrooms, so much the better—these will be fully appreciated in early spring and late fall. Stonework seems to harmonize best for the chimneys and breasts with wooden walls, and rough brick, tile or cement, if the latter material is employed throughout the building. In any case make sure that the fireplace and its flue are built along scientifically correct lines—a fireplace that smokes is of less real practical value than a gas-log.

Another Belle Terre bungalow, with entrance at the rear. The broad piazza in front commands a magnificent view of the Sound. Geo. Merritt Waid, architect



First floor of the building shown above. The studding inside is left uncovered

Just a word in closing, regarding foundations. With walls of concrete, stone or brick the foundation underpinning will, of course, have to be of concrete or stone, carried to bedrock or to a solid footing below the frost-line. With bungalows of wooden construction considerable expense may be saved by building on piers of masonry or even on locust posts that are set well into the ground, resting upon a broad flat stone footing. If this form of foundation is chosen be sure that the sill girders, set on the posts for the support of uprights and floor joists, are as near the ground as convenient. The space between the posts should be latticed. In other words, keep the building low down on the ground if it is to merit the title of bungalow.

Frequently a supply of gravel will be uncovered in digging out for the foundations. If it is, the problem of masonry supports, either as walls or piers, is half solved. With an outside supply of cement only, the foundations can be laid up of concrete, or the latter may be tamped around the locust posts.

Making the Porch More Livable

THE WONDERFUL POSSIBILITIES IN THIS DISTINCTIVELY AMERICAN FEATURE OF COUNTRY AND SUBURBAN HOMES—SUGGESTIONS FOR FURNISHING AND DECORATING IT AS AN OUTDOOR ROOM

BY LUCY ABBOT THROOP

Photographs by Jessie Tarbox Beals and others

ONLY a few years ago a porch was a porch to the average person (like the famous primrose to Peter Bell), "and it was nothing more." Now porches and piazzas have come into their own and they help vastly in bringing more gayety and pleasantness and healthfulness into our lives. Wherever one turns one finds the furnished porch; for sleeping, for dining, for living-rooms, it may be large or it may be small, it may be built for the purpose, or it may be a makeshift, but the ideal of outdoor living is there and is steadily gaining ground, and everyone tries to have at least a small portion of the open where they can be comfortable and where mosquitoes cease from troubling and spiders are at rest.

The ideal porch is broad and large enough to allow one always to find a shady and protected spot. It should be so planned that it is an absolutely necessary and convincing part of the architecture and not an excrescence or afterthought that it so many times seems to be. It may be an open porch or have pillars supporting beams or a roof, or it may have only a balustrade or a low wall or coping with a broad and comfortable top. Low easy steps should lead to the driveway and garden, awnings and vines should cast a pleasant shade, and shrubbery and gay flower borders add to its charm. The chairs should be so arranged that the best views are taken advantage of without the trouble of moving the furniture.

Willow or wicker furniture is not at all expensive and it will redeem almost any porch

One may not be able to have one of these large and entrancing porches, but that is no reason for going without one entirely. A summer in town is not so bad if one can find some place about the house where a porch or a

loggia or a little balcony may be tucked. With boxes of vines and plants on the railing, a swinging seat, a comfortable wicker chair, some cushions, a table and an awning or bamboo curtain if necessary, one has the possibility of many happy hours.

A porch can easily be made most attractive and livable and really amount to an extra living-room. There are many different kinds of suitable furniture made and all tastes and purses can be satisfied. It goes almost without saying that it should be of a kind not easily hurt by a sudden shower; in heavy storms it is of course pushed out of harm's way, but upholstery and expensive covering for the cushions are out of the question.

Willow or wicker furniture is always good, and may be left the natural color or stained as one wishes. It is something to be thankful for that elaborate designs are not often seen nowadays; good and simple lines are what people want, and it is easier to find them than it was a short time ago. Removable cushions covered with cretonne, linen, India cotton, Russian crash, denim, turkey red, etc., are all used, the colors and materials to harmonize with the general scheme of the house and garden. Another kind of furniture suitable to porches is called India splint. It is built somewhat on Mission lines, but is not so heavy and is very attractive. Everything needed is made in it, from seats and swings to curate's assistants, and it is usually stained a soft and pleasant brown. Rustic or splint furniture is always good and can be stained any color desired; and then there is the rustic furniture made of branches, which, when it is well built, is appropriate for camps and bungalows in the woods, or for garden seats. Mission furniture is exceedingly well suited to porches if it is of one of the best makes and not the extraordinarily heavy and clumsy kind that we too often see. There are chairs of all kinds, tables, settees, swings on chains, tea wagons, screens, everything, in fact, that can possibly be needed in these different kinds of furniture.

The subject of prices is always one of interest, as it helps one to make a general estimate of the cost, so I add a short list. Prices vary in different parts of the country and in different shops, which make it rather difficult to be absolutely exact, but from these approximate prices one can gain a general idea for a guide:

Wicker chairs cost from $3.50 to $24; India splint, from $3.25 up; rustic, $2.50 up; McKinley arm chairs are very attractive and cost $9.75. Wicker long chairs, $15 to $18. Settees or sofas in wicker, $8.25 to $25; India splint, $11.50 to $25; rustic, $13 to $21; other settles can be bought for $5, and settles with backs that turn down to form a table cost from $6.75 to $10.50. Wicker tables, $2.75 to $15; India, about $10; rustic, $4.25 to $6. Oak folding tables, with any finish, are $6.75; they are 36 x 40 inches and are large enough for simple meals; oak folding tea-tables cost $3. Tray-stands are from $1.50 to $9.50. Tea-wagons cost about $25, and large tea-trays, $5 up. Curate's assistants are $3.50 to $7.50. Magazine-stands cost $4.50 to $10.50. Screens may be had from $10 up. A very attractive India splint screen costs $14; frames, to be covered at home, cost $6. Swing settees cost from $8.50 to $30, and Gloucester hammocks from $10 to $16.

The rugs that are most appropriate to use are matting and prairie grass, Algerian Fibre, Japanese cotton and jute, woven and hooked rag rugs, bungalow rugs, and some Axminster and Wilton, and Scotch reversible. They vary in price from $3.25 to $50, according to size and kind. Very valuable rugs are out

This inviting porch is at the rear of a Philadelphia suburban home, over looking the garden. The white-painted willow furniture enlivened with bright-colored cushions and the grass rug makes it a most attractive outdoor living-room

of place for out-of-door service as a usual thing.

Colors for porch furnishings should take their keynote from the color and style of the house. The gray of concrete or plaster, the soft red or beautiful variegated colors of brick, the white or yellow of Colonial houses, or the browns and moss greens of shingles, all call for a variation of treatment. As a general thing we can stand gayer colors out of doors than in the house, for the kindly atmosphere treats them as it does the bright colors of flowers and seems to give them the needed softening touch. Bright red, which can be used to advantage in a cool climate, is often too hot looking unless it harmonizes perfectly with the color scheme. Yellow, and some greens, do not fade so rapidly as blue, but most pale colors vanish as if by magic in hot sun and sea air.

A corner of Mr. Ernest Thompson Seton's home at Coscob, Conn., where a corner of the roof covering is left off to secure the cheer of the sunlight

Curtains of heavy material, with or without a stenciled border, are often used to hide the service end of the house from view, but thick vines are really better. If one wishes a vine screen that will grow rapidly and last well through the season the Cobœa is most satisfactory.

If there is a bay window, looking out upon the piazza, a window-seat built around it is a good idea. It gives many extra seats and is an attractive feature when covered with cushions to match the others. It may be like the woodwork or like the furniture, as one pleases. A shelf for magazines, with weights to keep them from blowing about, is a godsend, and also a nest of tea-tables will be found most useful.

Of course we all know there are no mosquitoes in any well regulated summer place, but still, accidents may happen, and a strong wind may blow them from the little town across the bay, or the salt marsh five miles away—it is odd how often that wind seems to blow, and it is well to be prepared by having a part of the porch screened; it adds wonderfully to the joy of life. A simple way to screen a portion of the porch is to use black mosquito netting, six feet wide. Have it tacked carefully to the posts and woodwork and cover the edges with narrow molding painted to match the woodwork. One can enter from a door or French window from the house, and a hedge of plants across the piazza just outside the netting will keep people from walking into it.

And now a word or two about sleeping-porches. The custom of sleeping out of doors is becoming more and more common, and people who have faithfully tried it all the year 'round say that they feel fairly boxed up when obliged to sleep indoors. The fearful test of one's theories comes on the first cold night. I heard of one person who enjoyed it through the summer and autumn, and then one night late in November the mercury suddenly dropped to the neighborhod of zero. His New England conscience began to work on the subject of the furnace and drove him to his duty. Then came the tug of war. Should he crawl back into the fearful cold or go to his comfortable room? The porch won, and now all the members of the family follow his good example. A sleeping-porch, to be successful, should be well screened in summer and be as airy and open as possible. The couch, or couches, should be so placed that they are protected from the rain. Gloucester hammocks, made of canvas, swung on chains from the roof, are very comfortable. The porch should open from a well warmed dressing-room if it is used in winter. With flower-boxes along the railing and an awning it will make a very charming little upstairs sitting-room during the day. One could get a great deal of pleasure from it for one could lie in the hammock and read in peace without the fear of being interrupted by a sudden descent of callers.

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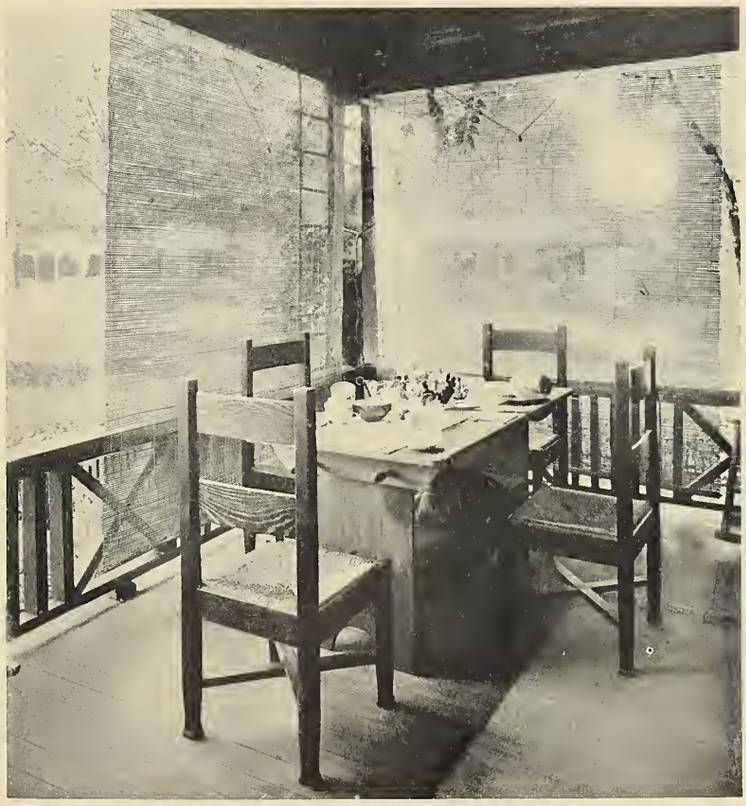


The practice of serving meals out on the porch is gaining in popularity. The Japanese rolling screens insure privacy

You can secure a very prompt and attractive effect by planting Gladiolus bulbs now as a border for the summer home

The Garden for the Temporary Home

SUGGESTIONS FOR THOSE WHO MOVE INTO A NEW HOME OR A SUMMER ONE LATE IN THE SPRING—WHAT TO PLANT FOR QUICK BLOOM

BY IDA D. BENNETT

Photographs by N. R. Graves, the J. H. McFarland Co. and others

ONE often hears the dweller in the country, or the cottager say: "We are only going to be here a summer, so it will not be worth while to start a garden, only to abandon it when we move." But why should one feel that he may only have the sort of garden that has to be abandoned—the garden of slow-rooting, slow-growing, sturdy things Why should he not bethink himself of the joy to be had in a passing garden of beautiful annuals, quick-growing, hardy, friendly to indifferent soil and generous in demanding little care?

The garden of perennials and hardy shrubs is a beautiful thing, rich in possibilities, but it is not the only word in floriculture; there is a vast array of lovely and desirable things to be had for the expenditure of a little, a very little time and money. To begin with, there is all the proud array of annuals which may be raised from seed, blooming in a few weeks from the time of sowing, and after them come the little seedlings of all sorts that one may buy from every florist, to transplant, or in the garden one starts in midsummer, the already well grown and even blossoming plants that will thrive when properly set out in their new environment. All these will prove that there is little excuse for the lack of some sort of a garden even in the temporary home, if one really wishes to have one.

Among the flowers one may have in any garden are the ever popular Asters, so greatly improved in the past few years as to be significant rivals to the Chrysanthemum. This improvement is principally noticeable in the size and shape of the flower. Formerly much yellow center appeared in even the best of the Asters, but this has been gradually cultivated out until now it is little in evidence. The fluting and waving of the petals of the flowers is another advance in culture, and some of the Asters are veritable fluffy balls, as for example the Comet Asters and the Ostrich and Peony-flowered varieties. Many people find the red and purple Asters attractive, but personally, I prefer the white and shell-pink varieties. Asters are one of the easiest flowers to grow, the seed germinating in from three to five days and the plants usually growing on finely from the start. Of course for very early flowers the little seedlings that have been started in hotbeds, coldframes, or inside in flats, will have to be procured from the florist to set out in the new garden. Good garden soil will grow Asters to perfection, and either a shady or a sunny place will suit them. Indeed I have never found Asters exacting in any respect, but they should not be allowed to suffer for water at any period of their growth, especially when they are coming into bloom. The Aster disease, which was so prevalent a few years ago, seems to have about disappeared, and the Aster-beetle is less in evidence. So one will not have to devote much time to the plants once they have their start and are kept free from weeds.

The Scabiosa is another annual easily grown and a most prolific bloomer. Like the Aster, plants of it should be procured from the florist, if early flowers are expected, and the seedlings transplanted out in the open. Lovely shades of color are found in the new hybrids of this flower: pure white, flesh color, azure blue, rose color, terra-cotta and purplish black—this last an ex-

ceedingly rich-colored flower. Their long stems render them admirable for cut flowers and they are lovely either for wearing or for tall, slim glasses of crystal. They require no special culture, and anyone can succeed with them.

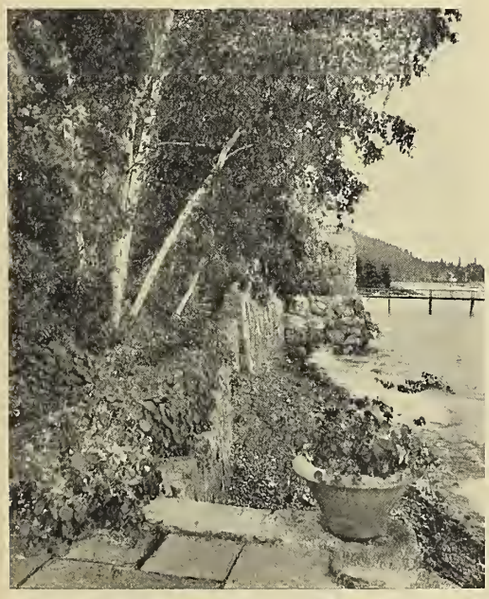
If started in good season, the Antirrhinums will blossom the first season, and are admirable for cut flowers. This applies likewise to transplanted seedlings. Some of the new varieties are magnificent, especially the Giant Scarlet, Giant Pink and the white varieties. A bed of these bordered with the dwarf Queen of the North—a pure white, about a foot in height—will be a joy all summer and the source of a boundless amount of cut flowers; and they should be cut, and not allowed to go to seed, as that would shorten their season of bloom. Such a bed may be edged with Sweet Alyssum, Lavender, Ageratum or Verbenas in scarlet and white, or the new Mayflower Verbena—an exquisite flower.

Petunias will thrive in almost any soil and they make a brave showing in a border

Ten Weeks Stock is a delightful plant to grow for cut flowers, as it is not only beautiful in itself, but also possesses an exquisite fragrance. Like all of the preceding, it should be grown from seedlings that have been started under cover, and planted out when the weather is warm. However, its seeds germinate quickly, like those of the Aster, making it especially available for the temporary garden.

The Bachelor Button, or Cornflower, is also easily and quickly raised from seed—the seed germinating in about three days either under cover or in the open ground, and the plants will be a mass of flowers all summer, seedlings after the first bloom giving a later succession of flowers; they are charming for cut flowers.

Then the dainty Schizanthus is well worth cultivating in the summer and often covers itself so profusely with blossoms as to hide its foliage entirely. Its seed should be sown at intervals of a couple of weeks apart, as it blooms freely but once.



Nasturtiums bloom very quickly from seed. The dwarf and climbing varieties will fill many bare spots

A certain amount of white is always necessary in any garden for the happiest effects, and one always wishes plenty of white flowers for cutting. This is made possible by sowing freely seed of Candytuft—the variety Empress is excellent for the purpose, the spikes of bloom being produced with great freedom and of enormous size. The long-spurred, white Columbine, though a perennial, will bloom the first year from seed and has an airy grace peculiarly its own, which does not occur in any other flower. Columbines (*Aquiligea*) are lovely in beds by themselves, or when used to border taller plants.

The summer garden will hardy seem complete without a bed of Pansies. These may be had from plants that have been started very early in a cool window in the house or in a coldframe, and plants already budded and in flower thrive hardily when set out in the belated garden. Keep cutting the flowers to prolong the bloom.

Flowering vines afford one of the strongest features of the temporary garden, as one can always find a place for a vine, even though there be no room for a flower bed. Nasturtiums, Morning Glories, Sweet Peas, may all be grown with little labor or cost, and the *Cobœa scandens* will delight one with a profusion of flowers throughout the summer, and will flourish on the north or west side of the house long after the frost has cut down most of the garden's other treasures.

The above are a few of the available annuals for quick growth in the temporary garden, but they present a selection which cannot fail to afford great satisfaction to the gardener.

But one need not confine his selection of plants to annuals alone. Very attractive temporary gardens may be quickly evolved by the use of such plants as the Canna. Cannas are about the most ornamental and tropical looking of plants seen in private and public gardens, and most attractive beds will result from a selection of the fancy-foliaged plants such as *Canna musifolia*, Black Beauty and the like, while the large, orchid-flowered kinds—Austria, Burbank, Allemanni, Italia and the like, are not only very effective on the lawn but also valuable for cut flowers. These also may be grown from the roots, or bought already started from the florist; large beds of the taller varieties, bordered with the dwarf forms, and edged with a border of dwarf Nasturtiums are beautiful and effective, or Caladiums may be used in connection with the Cannas with tropical effect.

Ricinus makes a handsome bed, and as it is easily grown from seed and makes a very rapid growth once it has become established, it is to be especially recommended for the temporary garden.

(*Continued on page* xvi.)

For the temporary home you can at least have flowers in boxes around the porch railing

Here is an opportunity such as may be found near most eastern cities —an old house and two acres at a rental of $50

The back of the same house from the orchard. The terrace suggests wonderful possibilities for future development

The Farmhouse Reclaimed

THE WONDERFUL OPPORTUNITIES FOR ACQUIRING COUNTRY HOMES FOR SUMMER OR ALL-YEAR USE IN THE WELL BUILT HOUSES OF A CENTURY AGO

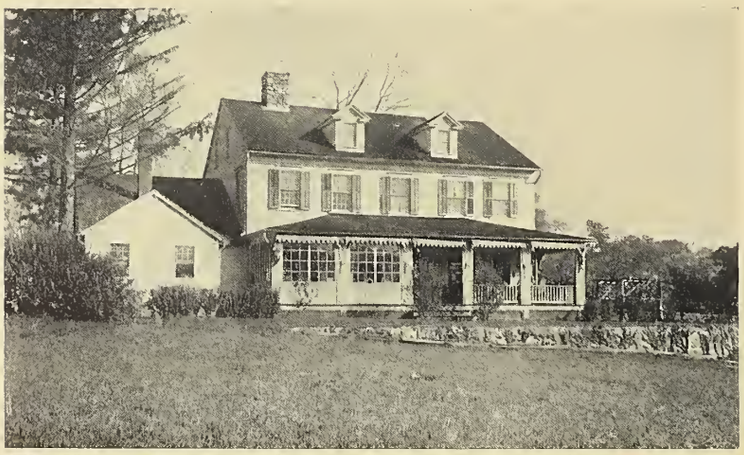
BY ALFRED MORTON GITHENS

Photographs by the author and H. H. Saylor

[*This is the first of two articles by Mr. Githens. It tells of the available material on the outskirts of most of the large cities, that may be adapted with little difficulty or expense to modern needs. In the second article, to appear next month, the specific problems of remodeling will be taken up, with concrete instances of common types as they are found and just what should be done in the way of alterations.*—EDITOR.]

AS a modern city overgrows her boundaries, as her citizens must more and more find houses outside her limits, so the old farmhouse finds new neighbors. Strange to say, it generally lingers on in a more or less dilapidated condition till most of the surrounding land is sold. Real estate men consider it adds little or nothing to the value of the land while a new, cheaply constructed cottage is valued at its full cost. Of course sometimes the old houses must be repainted, rotted roof shingles renewed, plastering repaired or replaced, but the sound old frame is there with its simple homely outlines, and generally in an architrave or mantel some delicate piece of decorative wood carving. The walls are perhaps filled in with brick; the timbers framed together with oak pins instead of the nails used now—as everyone knows, far stronger. Sometimes a house may be found where repairs are unnecessary; then the purchaser is doubly fortunate. My own house was built over a hundred years ago, but it happens to have been in fairly good repair. With its two acres of land, it cost me less than half what such a house would cost to build to-day with the inferior modern framing.

For a satisfactory tenant, I find a general willingness on the part of the landlord to make small repairs, repaint, or even install heating or light-wiring; but of course it is better to buy outright if one can, for there are many little improvements that suggest themselves from time to time, and one is tempted to rearrange the grounds or plant shrubbery and perennials which



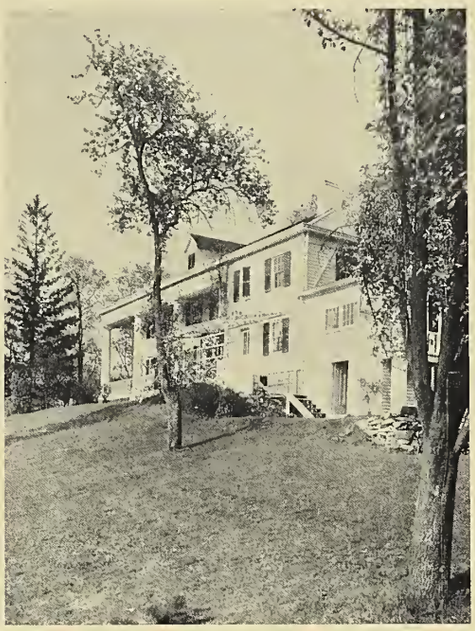
"The House with the Well Sweep" stands close to the road but its privacy is insured by the long stone wall

The rear of the same house. The long porch, glazed-in in winter, commands the view over the meadows

Three more views of "The House with the Well Sweep"—the path to the barn showing the picturesque service end, the house from the garden with the stone wall at the right, and the old front entrance

all accrue to the landlord's benefit at the end of the lease. As a purchase these houses are good investments, too; I have been offered considerably more than I paid for my house, and a neighbor has been offered double what he paid for both house and improvements.

There are many neglected farmhouses in the lanes and highways of this hilly rock-bespattered Connecticut country. They are elsewhere too; west of New York, along the Hackensack Valley, or scattered throughout Long Island, are the low-eaved Dutch houses which have been the inspiration for much of the new country house work as described in the recent February issue; Boston has her prim clapboarded houses, as through Lexington or Salem; Philadelphia her stone farmhouses and their great barns with sturdy whitewashed pillars; the cities of Ohio, Tennessee or Kentucky, each has its square farmsteads—these Connecticut houses are only examples of what may be found around any large Eastern city. They are alike in their quiet and unobtrusive dignity; one does not tire of them as he does of their more ostentatious neighbors.

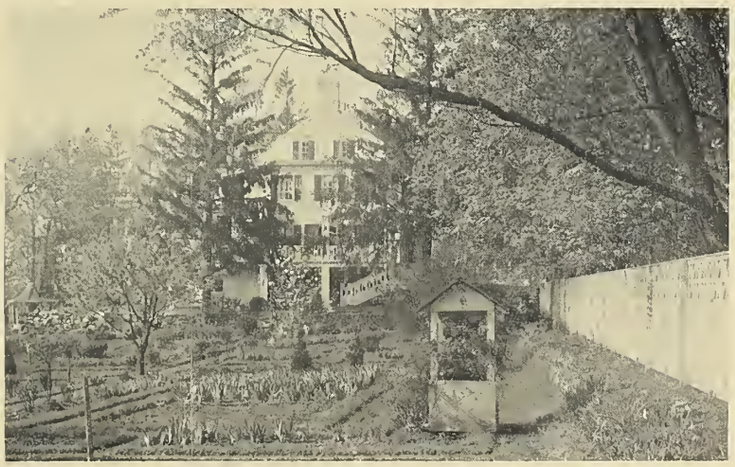


The rear of the house pictured below commands a magnificent view over a large orchard sloping down to the Mianus river

Most of them stand behind old elm trees, close to the roadside, with a straight path to the road in front; the rear is given over to tangled briars and ash-heaps. It is strange how the past generation seems to have found its amusement in watching passing neighbors from the "piazza" it generally strung along the house-front, careless of the old gabled entrance porch or "portico," destroyed to make room for it. What the last owners did we must undo; the part they neglected we must develop into the living portion of the house. Happily the days of "front" and "back" are over, and now there is a return to the wiser English tradition of entrance front and garden front; the garden is no longer between the house and the road, but behind or at the end, screened in some way from the automobile dust and curious gaze of passers-by. The kitchen is eagerly seized for one of the living-rooms (it was really a living-room in the old democratic days), and a new scientifically planned kitchen is built at the end perhaps, out of the way.

The House with the Well Sweep is of a type built shortly after the war of independence, steep-gabled with delicate cornices unaffected by the later Greek revival. It interests me particularly, because it is most like my own house, but it retains the original small entrance porch while mine has gone to make way for the almost inevitable "piazza." The columns, however, have been replaced by square posts (notice the columns of the Round Hill House; these are of the same original type). The

One of the more pretentious types showing the effect of the Greek Revival and corresponding to a southern "mansion"



The same house from the garden which is hidden from the road by the white fence. Photographed too early to be at its best.

A house built in 1765 that has been kept in splendid repair throughout its lifetime—remaining in the same family. The old box-bushes flanking the porch have grown so high that they shut out the view from the lower windows

house is but a few feet from the road, but cleverly screened therefrom by stone wall and picket fence, with masses of shrubbery behind.

The present owner has built the rear porch and terrace overlooking his hundred or more acres of farm land in the valley toward the west, where the Mianus River winds slowly through its low meadows. To the south he has developed a flower garden, photographed here in its autumn tangle. The interesting arched gates are, of course, modern; the seats of the entrance porch are a restoration.

Behind a row of enormous elm trees on the Post Road further down the river is a house built in the year 1818 (illustrated at the top of page 216); it could be occupied just as it is. I first saw it two years ago in late February. Since the first of the year we had been in search of a house with moderate rent whose rooms would be large enough for our heavy furniture. We had explored one suburb after another and had found small new houses in plenty, but they were invariably close to their neighbors with no gardens, no privacy, nor space for either. If one insists on a modern house at a low rental he must be willing to sacrifice these things; to us they outweighed anything a new place could offer, and this house gave all we required. Its large windows opened to the south on a terrace with apple orchard beyond, and westward to a ploughed garden at the lower level. A small brook meandered through the orchard and beside it the grass was just turned the early spring green. A window had been left unlatched and I climbed in; the old-time parlor and dining-room, with singularly beautiful gold-veined black marble mantels, a smaller smoking-room, a library facing the garden and the usual kitchen and service rooms were what I found, all so excellently disposed that it seems worth while to give a plan of the place and a suggestion of how it might be developed; but of this in the next issue. To us it promised much, but from the owner we found it had been rented the day before.

"The Round Hill House," with its delicately carved entrance porch and another pair of great box-bushes

Close to this house is one of the most interesting of all the old houses. Built in the height of that period when the beauty of a building was measured by its exactitude in reproducing Greek motives, with its great columns copied directly from the Parthenon, it overlooks and dominates the river valley, not at all the farmhouse type, but suggesting rather a Southern "mansion." The lawn to the rear, studded with apple trees of great age, slopes down to the river-bank; the garden to the south is interesting through the summer with its masses of flowers hemmed in with clipped grass borders; where

(*Continued on page* xviii.)

Grow Your Own Vegetables

V.—GETTING IN THE SUCCESSION CROPS—VEGETABLE INSECT ENEMIES AND HOW TO OVERPOWER THEM—THE NECESSITY FOR UNRELAXING VIGILANCE IF YOU WOULD HAVE BANNER CROPS

BY F. F. ROCKWELL

Photographs by Nathan R. Graves and the J. H. McFarland Co.

[*This is the fifth of a series of articles which will cover in a thorough and practical way the subject of amateur vegetable gardening. The aim is to furnish the information covering every detail of what to do and in such a form that it will be clear to the very beginner just how to do it. Each article and its tabular data will give the information needed at the time of its publication, so as not to confuse the home-gardener with an overwhelming quantity of detail; that is, the reader will learn what is to be done at the proper time for doing that particular thing. Those who follow the suggestions made, from the selection of seed to the storing of winter vegetables, may confidently expect a successful garden.*—EDITOR.]

The great danger now in the vegetable garden is in relaxing your vigilance. Keep fighting the drought and pests to secure vegetables like these

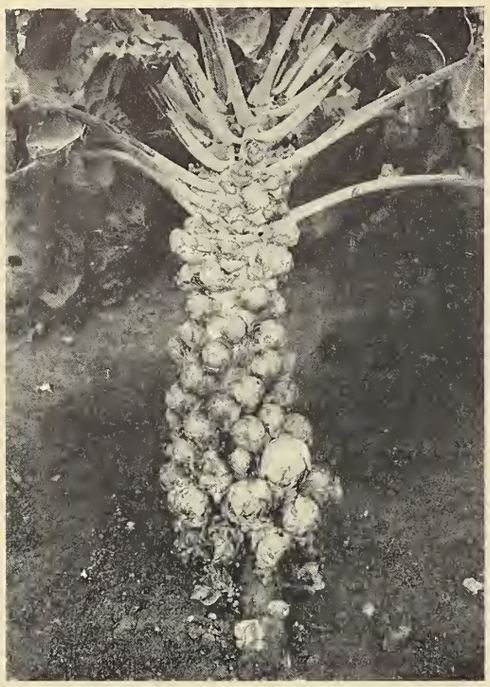
PERHAPS the most common and biggest mistake that the beginner at gardening makes is in letting up with his planning and work as soon as the "spring rush" is over. He has labored faithfully, and now carries proudly to the kitchen of his vine-wreathed villa a bunch of nice tender green onions, and a crisp head or two of lettuce. Radishes are plentiful. The cauliflowers are heading; the cabbages are growing a luxuriant bluish green; the peas have covered their wire or bushing, and are stretching out tendrils in search of further support; and corn and beets and beans are growing over night. With things so flourishing, and the weather getting uncomfortably warm, what a temptation to sit leisurely back on the veranda, enjoy a mild smoke and the fat fiction number of the latest magazine, and "let things grow!" But, alas, for him who yields! A single hot day may turn green and bitter the forming heads of cauliflower, if they are left unprotected; a visitation of striped potato beetles may in twenty-four hours work havoc with the thrifty young egg-plants; weeds neglected a day or two too long, then helped on by two or three days of rain, may mean good-by to the promising start onions or carrots or celery have made. Eternal vigilance is the price of success. There is no royal road in gardening to even so humble a reward as a cool green cucumber. So, if before, you've been at work with your coat off, lay aside now your vest also, and we'll go the rounds of the vegetable garden and see what needs attention.

First of all there's the little plot of ground which early in the proceedings we laid out for a seed-bed. It is time now to procure, if you haven't them already on hand, seeds for your late crops of cabbage, cauliflower, Brussels sprouts and kale. If you are not familiar with the two latter, do not fail to try them this year, especially the sprouts. They are very easy to grow, and don't have to be stored for winter use, as you can leave them right in the field, where the frost and snow only improve their quality, and use them up until Christmas. By many they are preferred to the best of cabbage. And for your cabbage, try a few at least of the Savoy, which is much finer in flavor than the ordinary sorts. For a variety to keep over winter, for use in the spring, Danish Ball-head, or some type of it, will prove most satisfactory.

Any time, from about the first of the month, be ready to sow your seed as soon as possible after a good rain. If none comes, give the seed-bed a good soaking the day previous to planting. If the soil has become packed or weedy since plowing, spade up a part of it, rake it off smooth, and in drills about one-half inch deep and twelve to eighteen inches apart, sow the seed thinly. (A packet of each variety will give plants enough for the ordinary home garden.) Before covering, press the seed firmly into the soil with the edge of a board or of the sole of the shoe, and firm the earth over the drill after covering. If the plants come up too thickly, thin them out *as soon* as the third or fourth leaf appears, for they will grow rapidly, and cannot be thinned without damage as soon as their roots begin to get tangled up in each other. If the sun is bright, give a copious watering just after thinning. In four to six weeks they will be ready to "set out" where they are to mature. Do this work too, if possible, just before or after a rain; or better still, if you do not fear a little clean mud, *during* one. If no opportune rain comes along, transplant late in the afternoon, and shade the plants with half a sheet of newspaper, held in place by a handful of earth, for two or three days during the heat of the day—say from ten to four o'clock. Read carefully the directions for transplanting given in the April number of HOUSE AND GARDEN, page 133.

Try to have your succession crops follow vegetables of some other kind—for instance, put your late cabbage after a crop of peas, lettuce, or spinach, *not* after early cabbage or cauliflower. Turnips and cabbage also should not be used in succession.

Try to follow this principle also with the crops of which you make succession plantings—lettuce, endive, peas, beans, beets, turnips. *Don't wait till your last head of lettuce is used before planting the next crop.* Plant a short row in the seed-bed at least every two weeks, and have plants ready to set out wherever opportunity offers. For instance, as the early beets begin to have blank spaces in the rows (which are fifteen inches apart), put in three or four dozen lettuce, or endive. Try some of the "cos" lettuce, that blanches at the heart, white and tender, even in the hot summer days. Unless your supply of tomatoes is



Try planting some Brussels sprouts. The tiny heads are far better than cabbage

neglect of this detail is the cause of poor germination.

By care given to planning *now* you can make your late summer and fall garden as interesting and satisfactory as it should be during June and July.

Do not, however, neglect your crops that are just coming to maturity. In the fight with weeds you should by this time be complete master of the situation. But the fight with insects is still to be carried to the bitter end. The following vegetables especially will have to be watched: Cucumbers, musk-melons, pumpkins and squashes, for FLEA-BEETLE (a tiny, black, hard-shelled insect), STRIPED BEETLE (an active little enemy, with a striped costume significant of his criminal instincts), and SQUASH-BUG (the big, spindle-legged black fellow who moves crab-like in any direction, and has a very offensive odor). The last is the most dangerous of the three, and is fatal if allowed to begin to multiply.

The best protection for the young plants is afforded by boxes of thin board, about eighteen inches square, and four to eight high, covered with cheesecloth or mosquito-netting. These are inexpensively made, and with care last many years. If you cannot provide them, keep the leaves of the young plants covered with a layer of finely sifted coal or wood ashes, or common plaster. This affords a *mechanical* protection. Hellebore, tobacco dust and kerosene emulsion will help to kill or drive away the pests. If you are making your garden produce as it ought, it will pay you well to have a compressed air sprayer, for applying insecticides and fungicides in liquid form. There are two types, the knapsack and the cylinder, the latter for ordinary work being more convenient. Whichever type you get, be sure to buy the machine with *brass* working parts. It costs a little more, but will outwear several of the tin and iron grades. Especially if you have a few fruit or decorative trees, will such a machine be indispensable in these days of insect pests. For very small gardens, a tin or brass "reservoir-and-pump" sprayer will do, but the better grade instrument will pay for itself in longer service and better work,—other gardening years are coming.

Bordeaux Mixture, for fungus diseases, such as blight, and arsenate of lead—which is safer than the old standard Paris Green or London Purple for *eating* insects, such as potato-bugs—are now put on the market in ready prepared forms, which need only to be diluted with water for use. There are several cheap and effective little "blowers," described in most seed catalogues, for the application of insecticides in *powder* form. But generally the spray is more satisfactory and effective, for with it the poison can be put on more evenly, and in a form which will last much longer.

Watch cabbage, cauliflower and Brussels sprouts carefully for the green CABBAGE WORM. On small patches hand-picking is the easiest and most effective remedy for him. The presence of ROOT-MAGGOT, a small white grub, will be denoted by the plants wilting and dying down without apparent cause. Affected plants should be taken up and carefully destroyed, or nearby plants will become infested. A dressing of hen-manure or guano and nitrate of soda will give the plants fresh strength to resist his attacks, and the soda seems to be effective in driving him away. A light sprinkling of coarse salt will sometimes stop his work. This aggressive and insidious invader is likely also to attack your onions. Use the same treatment as for cabbage.

Keep an eye open daily for the COLORADO BEETLE, OR STRIPED POTATO-BUG on potatoes, tomatoes, and *especially* egg-plant. Paris green, mixed with either water or plaster (read directions on the box), or blown on pure in invisible amounts with a bellows or "gun" made for the purpose, will destroy the young larvæ, which do most damage to potatoes. For the tomatoes and egg-plant, where you will have only a few dozen plants to watch, hand-picking, or spraying with arsenate of lead, will be better and safer. It is put up prepared in a thin cream paste, which requires only stirring with water. An over-dose will not burn the foliage, as is often the case with Paris green.

Sow Kale (or Borecole) now. The fleshy leaf stems are edible besides the leaves

FIGHTING THE DROUTH

Have you ever noticed how nice and moist your foot-tracks, especially the heel-prints, remain when you have pushed the wheel hoe through your garden? That is not because the dampness is staying there, but because it is *coming out*. And the soil you have worked, which seems to be drying out so fast, almost to dust, you will find on scraping aside half an

(*Continued on page* xx.)

You will need a spraying outfit. If the garden is small a brass hand-pump will do

An outside stairway leading to the studio proper shows characteristic Norwegian detail

Experiences in Building Summer Homes

VARIOUS TYPES OF HOMES BUILT FOR OCCUPANCY DURING THE SUMMER MONTHS—WHY THEY WERE BUILT THUS, AND HOW

Photographs by Jessie Tarbox Beals, Mary H. Northend and Others

A Norwegian Type of Studio

BY RUSSELL FISHER

Living-room, bedroom and bath are on the main floor, with the artist's studio above

A PLEASURE journey through Norway several years ago was the direct cause of the Norwegian style of architecture in the studio illustrated herewith. While a random selection of an architectural style from another land and another people is not usually justifiable for our domestic work, resulting too often in an exotic effect, at the same time there is reasonably felt to be a wider latitude of choice in the design of an artist's studio that is occupied only during the summer months. After all, too, the building needs no justification on the score of style—its picturesque mass and interesting detail are enough justification in themselves for its existence.

The studio was built in 1902 on the estate of Mr. G. Theodore Roberts at Onteora Park in the heart of the Catskills, for the use of Miss Roberts. Whole spruce logs were used for the walls, uncovered inside as well as outside. The milled woodwork of the exterior—turned corner columns, finials and other

Spruce logs were used for the first-story walls, with uncolored oiled woodwork above, and a roof of hemlock slabs. George A. Reid, architect

"The Old Red House," Rowayton, Conn., from the garden side. Remodeled for the summer home of two New York women

trim is without paint or stain, but each year it is given a protecting coat of oil. For the roof hemlock slabs were used, giving a rough, shaggy texture that harmonizes well with the remainder of the building.

On the lower floor there is a living-room, sleeping-quarters and bath. The studio proper is on the upper floor, which it occupies entirely. Here the side walls are covered with burlap, but the rough round logs used for the roof rafters were left uncovered. The room is very high as may be seen from the photographs of the exterior; and a gallery crosses one end of the upper part, affording convenient storage space for large stretchers, packing-cases and the various other bulky accumulations about an artist's studio. A big stone fireplace, seven feet wide, is located at one side of the room. An outside stairway approach for the use of models and visitors, gives the opportunity for one of the most charming bits of Norwegian architectural detail in the arcade illustrated on the preceding page.

A Remodeled Connecticut Farmhouse

BY KATHARINE NEWBOLD BIRDSALL

SOMETIMES a very small thing turns the scale when one is selecting a summer home. Two professional women, visiting in Connecticut last spring, passed an old farmhouse in Tokeneke Park, Rowayton, Conn. They had no intention of buying, but the noble elm trees guarding the farmhouse, and the beauty and simplicity of the Colonial door, turned the scale. They could not resist the calling of the old house and its two acres of good ground. To-day the house stands transformed, "a perfect paradise on earth," the owners declare. Perhaps the fact that the owners are artists—interior decorators—has helped in the transformation. But a little common sense, and some old furniture, quaint prints and suitable wall papers, go a long way toward making the average farmhouse very livable.

"The Old Red House" was built in 1765, and the sturdy oak beams are still firm and solid. The first thought of the new owners was to restore the house, inside and out, to its original Colonial simplicity; adding, however, electric lights, steam heat and running water.

In some of these old Colonial houses, it is hard to tell which side to call the front. The Old Red House has no front: it has the "gate-side" and the "well-side," and the Colonial hall opens equally attractively upon both. The gate-side originally had a large covered porch on the extension; this has been almost entirely removed, just enough of the flooring having been left to come flush with the body of the house. The remainder of the porch is spanned with small beams to make a sort of pergola, which admits a flood of light into the dining-room.

The doorway that so strongly and successfully invited the purchase of the house, is typically Colonial, with hand-hewn posts and ornaments. The semi-circular transom is an elaborate tracery of leadwork, showing an American eagle pattern. Nothing was needed here but the renewing of a few of the ornaments. The ceiling of the little porch is plastered. The door itself, sunbaked for ages, was left as it was, blisters and all. Two Colonial seats, painted white, and made after an old pattern, were fitted to the spaces on each side of the door. The house was repainted a Colonial red, with white trim and light blue-green blinds.

The old roof of course required re-shingling, and the new shingles were stained a weatherworn brown. Shingles were also put over the clapboards on the extension to make the rooms warmer. Most of the blinds had to be renewed, and a window was cut in the woodhouse. The latter was also re-shingled, thus making it available for a servant's bedroom.

Nothing further was done to the outside of the property the first summer. This year a formal garden has been started on the gate-side near the house and extending to the stone wall and hedge; and a vegetable garden further to the right.

The Colonial hall had been divided into two rooms by former owners, and it was necessary to remove the partition to

In the living-room the paper is a green and white stripe, with furniture coverings in large-figured English chnitz

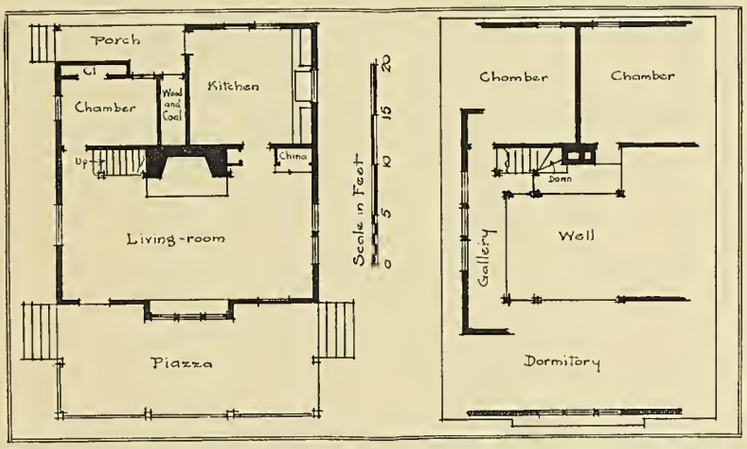
A bay-tree patterned paper in green and cream covers the dining-room walls. The furniture is Old English

recover the original hall. Then a paper in soft grays, a pastoral design of cows and sheep, was put on the walls downstairs and up. When this was done, the hardwood floor stained light green; the hand-made woodwork painted white; an old settee, half-moon table and rag rug in position, the effect was all that could be desired.

The partition which divided the kitchen into two small rooms was removed; the walls colored yellow; a white enameled sink introduced; and blue lineoleum was selected for the floor —a paradise for a maid!

All of the ground-story floors were relaid in hardwood and were stained green to match the hall. The ceilings are very low, and the wall papers odd and truly old-fashioned.

The dining-room, with its flood of daylight, has perhaps the most charm of any room in the house. The crane and copper kettle are there; the old andirons with brass knobs; and also



The living-room of the Hubon camp opens up to the roof, with a gallery around three sides

the brass "footman," an old English institution for keeping one's breakfast warm.

In the living-room, where the floors are also bright green, is more old English furniture, upholstered in large-figured English chintz. The paper is a green and white stripe.

A tiny library opens off the living-room, and is connected with the hall by a small passageway under the stairs, with closets to delight any housewife's heart. One of these closets

Mr. W. P. Hubon's camp near Salem, Mass., built of weathered shingles at a cost of $1100

had to be sacrificed in order to secure a stairway to the cellar through the house. Originally the Old Red House, like most of those of its day, had the cellar stairs only from the outside.

Six bedrooms were contained in the second story, and their old-time battened board doors, with iron latches, were left as they were. The floors, being of wide irregular boards, were covered with plain Japanese matting. The papers on the walls are reproductions of simple Colonial styles. In the large front room there is a good open fireplace and cupboards. The smallest bedroom was converted into a linen closet with plenty of wide shelves; another was turned into a bathroom; a third into a sewing-room. The others, with draped four-poster beds, and a few other pieces of old furniture, have made charming rooms. In the attic, which had never been finished in any way, two good-size rooms were secured by covering the rafters with smooth boards and building wooden division walls.

Surely this is a successful solution of the summer home problem for two women worn with business cares, for their families and friends; and surely a home worth possessing, not only for the comfort it gives, but as an investment.

The stairway leading to the two upper bedrooms and dormitory, and the great stone fireplace

A bay-window and seat occupies the side of the living-room opposite the fireplace

If you cannot get away for the Summer you can build a sleeping-room in the garden

An Outdoor Bedroom in Pasadena

BY ALVICK A. PEARSON

IT is estimated that two thousand people in the city of Pasadena sleep out-of-doors, or, what is practically the same, surrounded only by wire netting in screened porches or specially arranged out-of-doors bedrooms. One of the most convenient and attractive of these screened-in bedrooms is shown in the accompanying photograph. It is owned and occupied nightly by D. W. Coolidge, Secretary of the Pasadena Board of Trade, and his family. One year ago Mr. Coolidge caused this little cabin to be constructed right in the midst of his famous garden of shrubs and flowers, and after a twelve-months' use he contends that no money could induce him to abandon it. The building measures 10 x 20 feet.

A Permanent Summer Camp

BY MARY H. NORTHEND

THE interesting little camp, illustrated herewith, is the property of Mr. William P. Hubon, of Salem, Mass., and it was built at a cost of $1,100 from plans of the owner, who designed it as a retreat where he and his friends could spend the summer months and enjoy week-end gatherings all the year round. It stands on a sheltered site surrounded by trees, at a point about a mile back from the main highway that leads from Middleton to Salem, and it overlooks the picturesque shore of the Ipswich River, and the near-by stretches of meadowland and woodland dotted at intervals with camps.

A Summer home of the Craftsman type, the living-room of which opens wide upon the corner porch

The exterior finish is of weather-stained shingles with trim painted white, and the quaint gabled roof, broken at intervals by groups of dormer windows, is also shingled. A broad veranda, fifteen feet wide and twenty-seven feet long, extends across the front of the house, and it serves the purpose of outdoor dining-room during the summer season. Its roof covering is formed by the flooring of a second-story apartment, built out above it and supported at the outer edge by stout posts. Beneath the veranda is a storage place for canoes, concealed from view by an attractive latticework arrangement stained to match the trim. At the rear of the house a small covered stoop connects with the kitchen, and is convenient as a storage place for wood, etc.

The entrance door opens from the veranda into a spacious apartment, which serves the double purpose of living-room and dining-room. It is open to the roof, showing the rafters, and its walls, like the rest of the interior, are sheathed in North Carolina hard pine, shellacked, and the floor is of the same material shellacked in white. The feature of the room is the great open fireplace at one end, which measures twelve feet in width and is built of rough stones picked up on the estate. It is fitted with all the old-time fire implements and the andirons are contrived from pieces of railroad iron bent into the proper shape.

From one end of the apartment opens a well appointed sleeping-room, and to the right of the fireplace a door connects with the kitchen. In a corner beside this doorway is a cleverly designed china cabinet and sideboard combined, with space beneath for linen, and directly opposite is another large built-in cabinet with a set of drawers underneath. Opposite the fireplace is a broad low window, below which extends a softly cushioned window-seat with locker. On either side of this window are low built-in cupboards, and throughout the house these same space-utilizing devices are cleverly arranged.

To the left of the fireplace a short flight of stairs ascends to a balcony that extends around three sides of the room and serves as hallway for two nicely furnished chambers and the apartment over the front veranda which is ordinarily used as a sitting-room, but can be readily transformed into a sleeping-apartment when the camp contains an overflow of guests. Built-in lockers fill in spaces between the chambers and at one end of the front apartment, and serve as receptacles for the storage of extra bedding, etc.

The kitchen is the gem of the whole house and contains many interesting space-saving features. At one side is the porcelain sink, below which are closets for pots and pans, and on either side of which extend broad shelves. Beneath the shelf on the right is a set of drawers for kitchen supplies, and on the wall space above is a glazed-in cabinet to hold dishes.

Opposite the sink is the stove on one side of which is a broad shelf supported on hinges, and so contrived that when not in use the supports can be lowered, and the shelf thus rests flat against the wall

A Sectional Bungalow in Florida

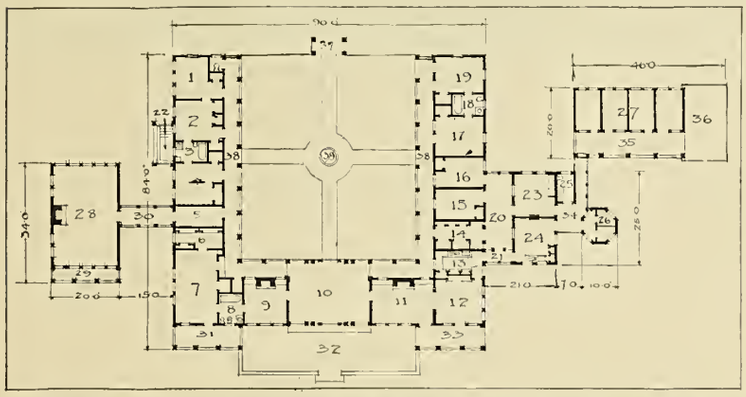
BY H. E. HARTWELL

THE bungalow, illustrated at the top of the next page, is one that was built in New York City in sections as large as would go through a freight-car door, shipped to Ormond

Beach, Florida, and erected there as a winter home for Mr. Israel Putnam. With all its annexes the building has twenty-seven rooms and four baths. It has a frontage of 200 feet and a depth of half that, and as the plan shows, it has a court in the center fifty feet square, which is filled with palms and orange trees.

The site chosen is on the east bank of the Halifax River, in a grove of palmettos, magnolias, orange, lemon and persimmon trees, with here and there a stately water oak, draped with the native hanging moss. An ideal spot for a bungalow, surely.

The approach is from the private dock on the shore and leads up by an easy slope with occasional steps through a long Japanese pergola to the tile-paved terrace across the front of the building. This terrace is about eighty feet long and fifteen feet wide, sufficiently well shaded by the trees to be comfortable in the Southern winter sunshine.



Twenty-seven rooms and four baths are found in this bungalow that was built in sections in New York and erected at Ormond Beach, Florida. Designed by H. E. and H. F. Hartwell

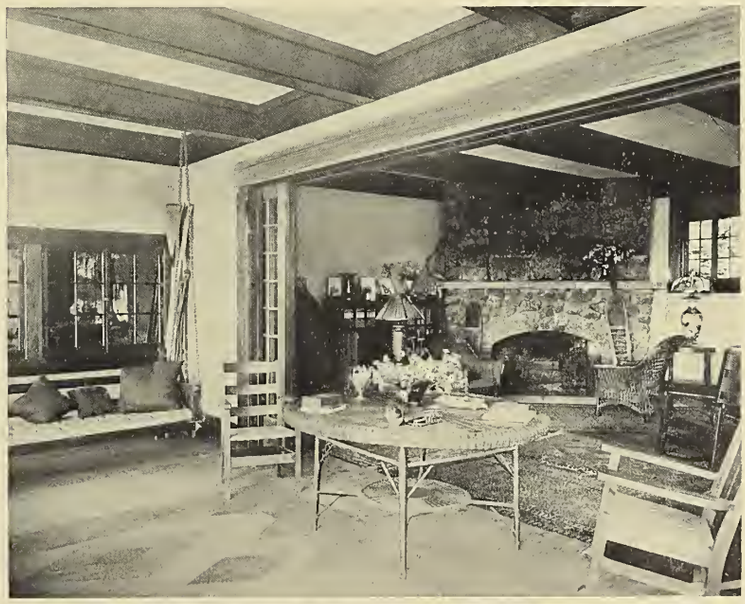
Inside the bungalow there is a variety of treatment in color and materials. The living-room, dining-room and study are finished in two shades of ivory, with doors enameled emerald green. Here the walls are wainscoted to a height of four feet, above which there are panels filled with Japanese grass cloth extending to the ceiling. Between the ceiling beams are panels of Japanese pebbled leather in light shades of gold. Sideboard, bookcases and seats are built in, giving a comfortable informal effect in keeping with the character of the building.

The Putnam bungalow at Ormond Beach is built with yellow pine structural members and asbestos cement walls between

The sun-parlor, which is used as the main entrance, has a red tiled floor and apple-green walls above a five-feet wainscot of gray asbestos cement. The ceiling is a pebbled light carnelian red and gold. For the four bathroms and the master's suite white enamel has been used as a wood finish, with the doors of mahogany. In the south wing the bedrooms are stained with Japanese colors and hung with grass cloth.

Passing from the court garden under the shelter of a pergola, one descends picturesque stone steps leading into the Japanese garden. The latter was readily constructed with the wealth of palms, palmettos, ferns, orange trees and kumquats that cover numerous small islands in a space of about an acre. A more readily available place for carrying out a Japanese garden it would be difficult to imagine. The walks were laid out with stones of a shell rock formation—about the only stone to be found in Florida—in the usual random manner, leaving space between for grass and ferns.

The difference in grade between the palm court and the extreme rear is about ten feet, giving opportunity to create four lakes at different levels. Water was obtained from a driven well in such abundance that fifteen thousand gallons daily passes over the little Japanese cascades, under quaint little bridges, around stepping stones and stone lanterns until it finally finds its way through a winding brook into the Halifax River.



Two views of the porch and living-room of the house illustrated on the opposite page. Wide sliding glazed doors permit the two to be used as one throughout the summer months

Masses of lavender phlox with pink and white tulips blossom under the pergola in early May

By following the planting scheme suggested a mass of foliage and bloom continues up through frost

Plants for Under the Shady Pergola

HOW ONE VINE-COVERED PERGOLA HAS BEEN MADE ATTRACTIVE INSIDE AS WELL AS FROM WITHOUT, AFFORDING BLOOM FROM EARLY SPRING UNTIL FROST

BY ADELINE THOMSON

Photographs by the author and others

THE pergola has become an important factor in our yards and gardens, for it not only gives a picturesque setting to all styles of planting, but it lends to the garden landscape a touch of stability and character that are so desirable in the laying out of the home premises.

No serious difficulty is met in beautifying the exterior of the pergola, for climbing vines, enjoying the full benefit of open air and sunshine will quickly transform its bare, hard outlines to a tracery of grace and beauty; but the planting within the shady retreat is a problem not easily solved, for few plants thrive in so sheltered a location.

The pergola, however, has lost half its charm unless its leafy covered walk is bordered by blossoming plants, and while it is true that all varieties of flowering things are not adapted for this purpose, there are a number of them that will succeed remarkably well in the shaded area. In the past three years I have spent much time in working out a flowering scheme for such a border, and with the successful result that from early spring until late fall the shaded enclosure of my own pergola presents a constant display of changing form and color that is most gratifying.

Outlining a garden of hardy plants along two sides, the pergola stretches some ninety feet in length. The posts of the structure stand eight feet apart each way, and a gravel walk extending through the center, measuring three feet in width, leaves a border two and a half feet on either side for blossoming plants. I might say, in passing, that in the entrance of the pergola (eight feet square) there is no planting, but the space serves as a out-door dining-room, containing a square stationary table and rustic benches.

In the early spring, the first flowers that unfold in the border are Hepaticas, closely edging the walk, and from the tenth to the twentieth of April these pink, lavender and white blossoms are a constant source of delight. The flowers, however, are not all that recommend the plant to favor, for attractive leaves and low-growing characteristics make it an ornamental edging plant throughout the whole season, and even for the late-planted pergola border they are worth while introducing at any time.

A pergola on a Nahant, Mass., estate, where plants in tubs and the irregular stepping-stones make an attractive vista

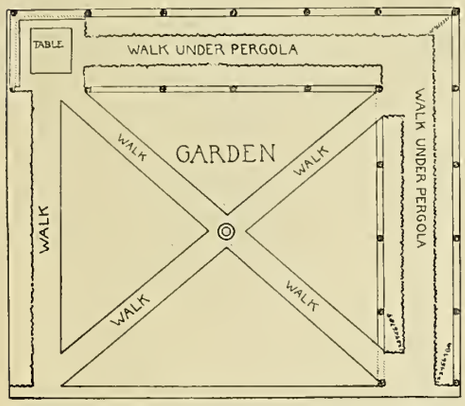
Masses of blossoming Phlox (*Phlox divaricata*) following in quick succession, change the border in early May to shades of delicate lavender, while the color effect is enhanced by pink and white tulips that flower at the same time. This early variety of Phlox cannot be too highly recommended for the pergola, for it thrives here luxuriantly and possesses foliage which, like that of the Hepatica, is decorative throughout the entire summer.

Wood Violets carry on the flowering scheme from the twelfth of May until the first of June, and it would be hard to imagine a more exquisite effect than that produced by long rows of these wild

plants, literally blue with their beautiful harvest of bloom.

Stately Foxgloves usher in the month of June and remain in flower during the four weeks following. The blossoming season is prolonged at least two weeks by cutting the main stalk immediately after its beauty has faded, thus forcing the strength of the plant into the side shoots, and inducing continued bloom. Masses of blossoming Foxgloves always create a striking display, but when their stately spires are raised within the vine-clad pergola, accenting the very spirit of its formal outlines, they seem an inseparable part of their surroundings.

During the heat and drought of July, the border is refreshed by quantities of white flowers borne by Achillea (the Pearl) and the graceful Campion—another invaluable plant from the woods. At the coming of August, these flowers are gradually supplanted by gorgeous Auratum Lilies and sweet-scented Nicotianas, while they, in turn, make way for starry-eyed hardy Asters that throng the border until frost.

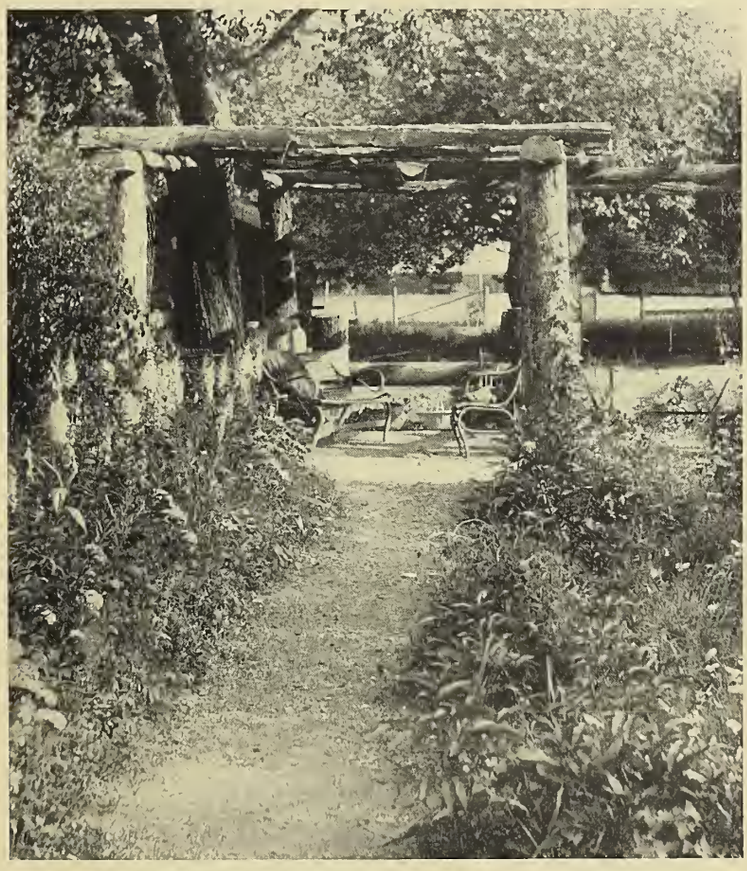


It seems best to arrange the planting in rows, with the low ones towards the walk as indicated

The planting within the pergola is much more effective with the flowering scheme the same on both sides of the walk, and varieties of a kind planted in rows the entire length of the structure. While, at first thought, massed planting would seem less stiff and artificial, on considering the narrow space available for the flowers, and the severe style of the pergola, it will be recognized that formal planting is the most attractive for the purpose.

The planting formed of the foregoing varieties is a permanent one, for all of the plants are hardy, with the exception of the Foxglove, which is a biennial, and the annual Nicotiana, but as both varieties self-sow, they, too, appear in their accustomed places from year to year.

The author's pergola, where the lines and border planting harmonize with the rustic structure



In the author's pergola the corner serves as an outdoor sitting-room, furnished with a table and chairs

A rustic pergola that shows an interesting treatment of horizontal outside members and corner braces inside

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FOUR OUTDOOR FEATURES OF SUMMER … THAT ARE WORTHY OF EMULATION

With a striking architectural treatment bright-colored rugs are effective

Almost anyone could build a rustic seat like the one by this Adirondark shelter-camp

Furnishing the Camp or Summer Home

SUGGESTIONS FOR AN IMPROVEMENT OVER THE COMMON USE OF CAST OFF FURNITURE

BY LOUISE SHRIMPTON

Photographs by Jessie Tarbox Beals and others

The Indian baskets lend color to this gray stone chimney breast

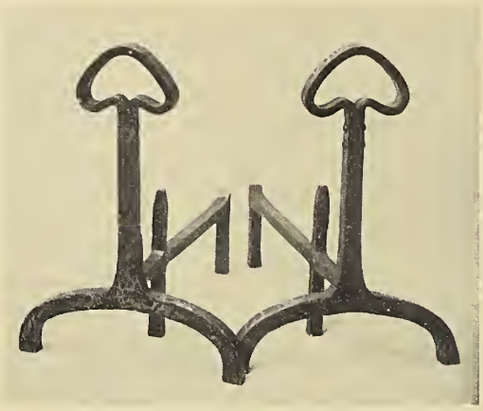
THE ordinary summer camp or cottage is often used as a dumping ground for cast-off furniture. Chairs and tables representing the fads of the past thirty years or so jostle each other on the living-room floor, in startling contrast with rough walls and a simple fireplace. The constructive features of the camp, usually in harmony with rugged surroundings, are completely overshadowed by this motley method of furnishing.

In the camp of distinction more restful conditions prevail, and furniture and fitments are planned with especial regard to their environment of woods and fields. The old furniture of a city home is thought unsuitable for use in such a camp, as an old top-hat or a discarded ball-gown are judged unsuitable for wear in the woods.

Built-in furniture is employed wherever possible and is, like the interior woodwork, of inexpensive wood. Rough seats and tables as well as cupboards and shelves are often built against the walls of a camp, adding greatly to its attractiveness and saving space. A large screen fastened to a wall is used in one instance to divide a room in two, and is folded back against the wall when not needed. In another case a movable partition is formed by a large dish cupboard reaching nearly to the ceiling, with doors opening on each side, and drawers that are pulled out in either direction. This cupboard is the division between kitchen and living-room, so that the space devoted to either room can be changed at any time. Built-in window seats are often made in bedrooms, with leather hinges and straps, and are used as clothes-chests.

An interesting variety of camp furniture is made of cedar posts, planed on inside surfaces that come into contact with the hand, and with outer surfaces left untouched except for the removal of the bark. These primitive pieces, massive in construction, seem a natural outgrowth of the woods, and are stained in forest tones of grayish green or brown. It is easy for an amateur cabinet-maker to build furniture of this type, and rainy days at camp are often utilized for this occupation. A good example of a simple bedstead is shown in our illustration of a camp bedroom. This bedstead is unusually large, and is built of massive cedar posts, fastened together with wooden tenons and wooden pins. The natural contour of logs and saplings is preserved on the outer surfaces, and the piece is stained a green that is modified by the warm tones of the cedar. The bench in our photograph of an Adirondack shelter camp might easily be built as an indoor settle to place in front of a fireplace, and could be made comfortable with seat-cushion and pillows of inexpensive material. Morris and other chairs could be built in similar fashion. As much attention is given to design and proportion in this style of furniture as in any other, but the only finish is the satin-like quality possessed by the wood next the bark. In some pieces such as gun racks or cupboards the bark is left on, together with little branches that are utilized as hooks.

The furniture used by our pioneer ancestors in their log cabin homes was built in a simple and primitive style that is in perfect keeping with the camp of to-day. Those of us who possess a great-grandfather's chair with rush or splint bottom seats, or old chests and tables of simple pattern, can put them to no better use than in the country lodges, in surroundings that duplicate the earliest stage of their existence. Many of these relics of former outposts of civilization are still to be found in country attics or kitchens, and cheap reproductions are made by a few furniture firms in unfinished woods that can be stained or painted by the purchasers.



Have your local blacksmith hammer out a pair of andirons

It is a futile undertaking to attempt to "decorate" a camp or summer cottage. The natural grain of the interior woodwork, the interesting grouping of stones or brick in the fireplace, are decorations enough for the walls. If other wall covering than a rough wainscot is needed, then building paper, a cheap Japanese matting, or even the matting from tea-chests, may be utilized. Old fence rails, or the weathered gray boarding from old houses, are sometimes employed for in-

Use the simplest curtains, if any, stenciled perhaps with some appropriate conventional design

Build in the sideboard, bookcases, seats and such features and the summer home will need little else

terior walls with charming effect, in connection with fireplaces of gray stone. Open shelves are used to hold the necessary dishes and camp utensils, which serve as decorations when not in use. Pictures of any sort seem an impertinence in a camp where windows may be planned to frame in bits of surrounding woods or lake in interesting fashion. Leave them for city houses. The needful window curtains and draperies are of cheap material in harmonious colors. If figured stuffs or plain materials with decorations in embroidery or stencil are used, the motives employed suggest the environment of the camp; the pine cone is perhaps selected as motive for decoration of pillow covers and draperies in a woodland camp; an antique ship in full sail, or a wave or shell motive may be chosen for a seaside cottage; while whatever the design, it is conventionally drawn and simply executed. For sleeping-rooms, light-weight blankets are sometimes used as portières, hung on bamboo rods, their stripes serving as borders. Old-fashioned blue bedspreads are found to be suitable bed coverings, and blue checked gingham pillow slips are easily washed, need no ironing and are distinctly pleasing in effect.

Bare floors are the rule in camps far from civilization, but if rugs are used they are of the old-fashioned rag or braided variety, or the always harmonious Oriental rug is occasionally found. Rugs of woven prairie grass are fitting and durable.

The chipped and superannuated china of a city home is not used in a carefully planned camp, but quaint pottery is chosen with a view to its decorative as well as to its wearing qualities. If the furniture is old Colonial, the dishes are reproductions of old blue, bought for five or ten cents a piece, or Canton, with its oyster whites and pure blues is indulged in; if massive furniture of modern make is used, then the pottery is Hungarian in vivid colors, or a cheap Japanese ware, or heavy Spanish ware in greens or browns. Sometimes ordinary kitchen pottery in browns and yellows is made to serve for the table as well as for cooking.

The fittings of the fireplace that is always the chief feature of the camp interior are chosen for the well equipped camp among models of strong and sturdy appearance. A country blacksmith is sometimes pressed into service, turning out rude andirons and fire-sets on his forge. Bellows are a necessity and a long iron rod is easily obtained and is better than the ordinary poker.

The problem of lighting and lighting fixtures, always a serious one, is usually simplified for camp dwellers into a choice between oil lamps and candles. While oil lamps are difficult to keep clean, smoky and dirty, they are more frequently employed than candles. Burners and fonts are bought separately, and placed in rough earthen jars, filled in beneath the fonts with sand to give them stability. Either Japanese paper or raffia shades are used. If candles are selected, rough wooden or copper candlesticks are made to hold them in sufficient numbers to give a good light.

(*Continued on page* xiv.)

A massive bed made of smoothed cedar with a satin finish

A summer home furnished with pioneer furniture 150 years old

A china-closet is utilized here to separate living-room from kitchen

The Practical Side of Rose Growing

HOW TO PRUNE—WHEN AND WHAT TO SPRAY—THE SUPERIORITY OF GRAFTED STOCK FOR THE SMALL GARDEN

BY LUKE J. DOOGUE

Photographs by the author and others

The Tea Rose, so-called from its characteristic scent, is the best for forcing

THE great interest in hardy perennials shown by everyone planning a home garden has, to some extent, affected the popularity of the Rose as a garden flower. This is a great pity. Though it must be admitted that Roses are not the easiest flowers in the world to bring to maturity, nevertheless the love of flowers should include the love of their care, for very little attention, after all, beyond that given any hardy flowers will be required for bringing a garden of Roses to successful bloom.

There are, unfortunately, many instances to be recorded of useless root-stock being acquired by the amateur garden-maker who has not been careful in ordering his Rose plants from reliable nurserymen, or who has not taken into account the climatic and soil conditions necessary to bring them to proper florescence.

One might as well expect a bed of granite to nourish a field of wheat as to expect to coax loveliness from the Rose when it is planted in the wrong soil. Roses must be nursed, tended, watched and protected, although there are many varieties which seem obliging enough, after a while, to flourish by themselves. Indeed the flower-lover should cease to hesitate Rose-planting in his garden merely because either he has been told it is a precarious undertaking, or that defeat will meet his attempts.

One does not always expect a great amount of space to be given up to the Rose in a home garden; the Rose-garden as such, that is, as a distinct garden by itself, is, of course, only to be expected in premises of greater extent. However, almost anyone who has a plot for flowers at all should have room for a few beautiful Rose bushes, or climbing Roses against wall or trellis, or a little strip bedded for a Rose border.

Under ordinary conditions it is necessary for the Rose-grower to exercise a fair amount of diligence in the matter of making a bed of Roses that will not turn out to be merely a bed of thorns.

SELECTING STOCK

Good Roses will do better in a poorly made bed than poor Roses in one having every soil requisite. There is no place in the world where, no matter how alluring the offers, it is safe to assume that one may obtain a couple of dozen first-class Hybrid Perpetual Roses for the price reasonably charged by reliable dealers for one. Roses are not to be found on bargain-counters.

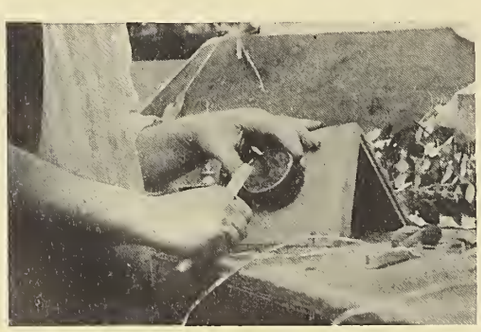
MAKING A BED

"You have made your bed and now you must lie in it" is a very old saying that will be familiar to everyone. Nevertheless it is ungenerous to make a poor bed and expect your Roses to do anything but die in it. Remember that when you receive your package of Roses from the nursery, they will need attending to at once, for the chances are that they may have been several days in transit, a delay that, at best, is somewhat of a set-back to their growth.

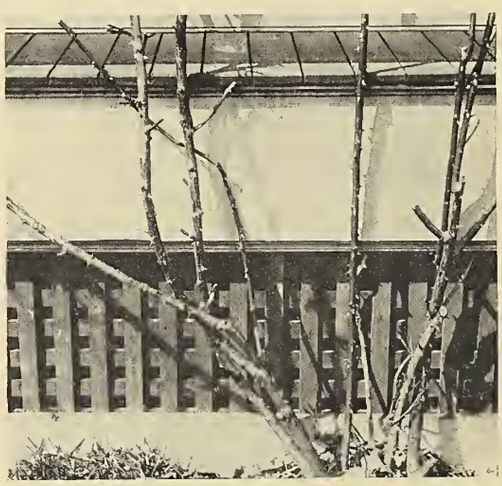
Unpack the newly received Roses, and if it is not possible to plant them in their final position immediately, heel them in—that is, make a temporary planting. If they are dried at all, soak the plants well. When you uncover them again it would be well to puddle them; that is, to soak the roots in a puddle of mud made with rich earth. Puddling greatly benefits Rose roots. The main thing is to keep your Rose plants out of the ground for as short a time as possible. Remember the roots of the Rose are extremely tender, and though they respond to care and attention, they perish almost immediately when neglected.

ROSE PRUNING

Hybrid Perpetual Roses should be pruned in the spring before growth starts. At that time about two-thirds of the previous year's growth will have been taken out, close down. Hybrid Tea Roses must not be pruned so much, nor do Ramblers need much cutting, though where a Rambler has had little attention for a long time the cutting out can be more vigorous, all old hardened canes which do not break easily and which only choke the plant without lending themselves to



A strong-growing Manetti stock, cut ready for grafting



Too much old wood here; it should be cut back

Tying the graft rose in place on sturdy root stock

A Rambler that has not been properly cut back and the resulting scattered bloom. Old wood bears no flowers

florescence, being removed. This cutting will help the plants materially and will increase their Rose-clusters at flowering time. On every hand, during the summer, old plants can be seen with many blossoms, which extent of bloom could have been doubled, however, had the plants been properly attended to.

ROSE PESTS

There is probably no plant more often the victim of insect and other pests than the Rose. One ought not to begrudge the time for a daily inspection of the plants, that would protect them from their enemies. Look over and under the leaves for slugs and beetles, regularly and carefully, for if you neglect this you will rue your carelessness. A solution of hellebore, whale oil soap, decoction of tobacco stems, and such-like insecticides and fungicides, will ward off lots of trouble. Arsenate of lead (about one pound to ten gallons of water) is effective, but it has the disadvantage of whitening the leaves. A good force of water is one of the best pest-preventatives. If the plants are regularly sprayed with a forced stream, very little poison or chemicals will be required. Spray under the leaves, along the stem—in fact, make a thorough job of it, and the pests will then find it a difficult matter to betray the hospitality of the Rose.

ROSES ON THEIR OWN ROOTS OR GRAFTED

Not only are Roses grown on their own roots, but they are sometimes grafted on a foster-stem of some other Rose, such as the strong-growing Manetti. Some say that Roses on their own roots are better, while the advocates of grafting are equally emphatic in declaring grafted Roses to be vastly superior. They will say that a Rose-plant not grafted has not the necessary vigorous constitution to withstand adverse conditions, etc. To this the other enthusiast will oppose such facts as the one that grafted stock will throw out suckers so fast that in spite of all that can be done the budded stock will

(*Continued on page* xiv.)

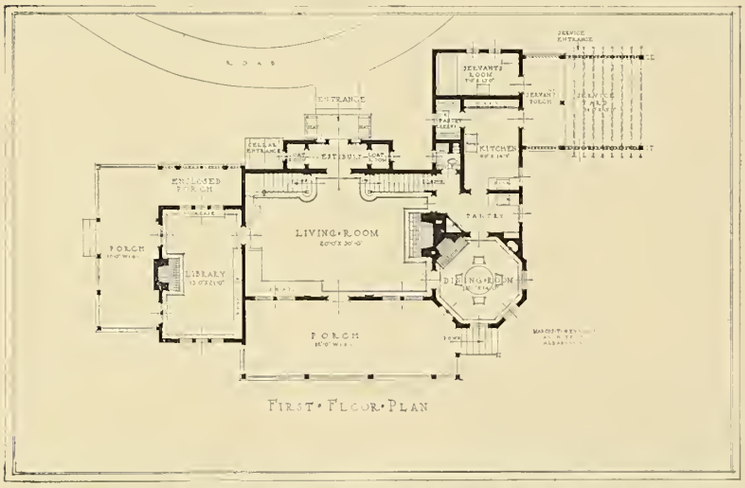
The grafted rose in place. For the small garden these are better

The Hybrid Perpetuals are known by their dull green, wrinkled foliage

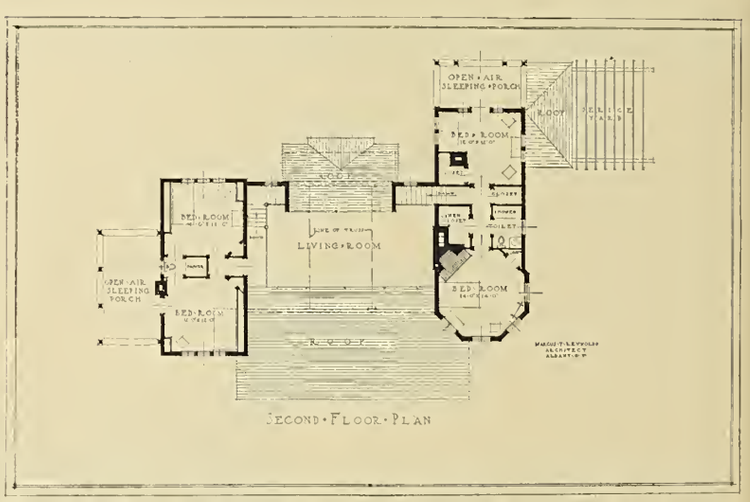
The shoot at the side springs from the root stock and should be removed

The Barnes summer home has been built with two large outdoor sleeping-rooms, one on the near-end

The entrance is at the rear opening into the living-room. At the left is the service porch and yard



A living-room, twenty by thirty feet in size, is the feature to which all else is subordinated



Three of the four bedrooms adjoin the sleeping-porches. The fourth is the octagon, with four windows in it

A great rough-textured brick fireplace, laid with broad white joints stands at one end of the living-room

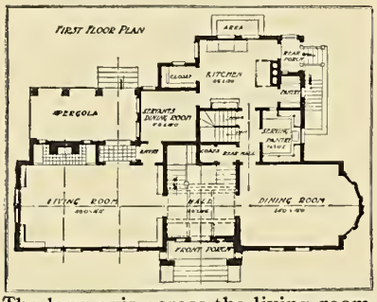
The entrance door, with its projecting hood and flanking seats, opens into a vestibule coat-room

THE SUMMER HOME OF MR. WILLIAM BARNES, JR., ALBANY, N. Y.

The Barnes living-room is a striking example of the architectural possibilities in a large room that opens up through the second story to the roof. Another stairway balances the one here visible

"Garden Corner" is built of stucco on a wood frame. The exterior woodwork is of cypress stained brown; the hingles are silver gray; the sash, sage green

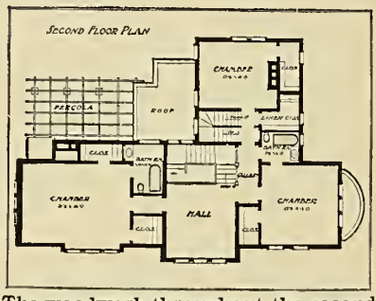
The only porch on the house is in the corner formed by the ell and sheltered from the sun by a vine-covered pergola motive, giving a view over the garden



The long axis across the living-room, hall and dining-room gives effective vistas along the 65 ft. length

THE HOME OF MRS. S. A. COOLEY GROSSE POINTE DETROIT, MICHIGAN

Carleton Monroe Winslow, architect



The woodwork throughout the second floor is enameled white. There are two servants' rooms in the attic

The plot on which "Garden Corner" stands is 150 ft. wide and 125 ft. deep. The little tool house was designed for its place under the tree

The house has been completed only three years, but the garden has responded well to the care given it from the very start

The living-room is finished in a combination of cypress and Circassian walnut, stained alike. An arched inglenook is the main feature

The woodwork in the first-story hall is chestnut, stained brown, the wall covering between the panels being gold grass cloth

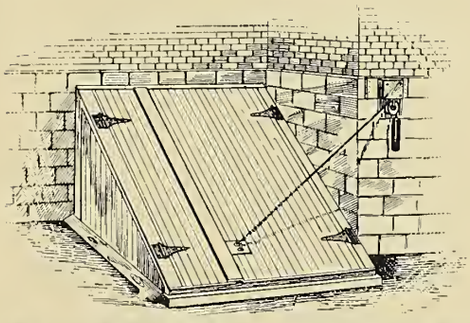
A Suggestion for Shade Rollers

WHEN buying new shades on rollers I always put in a number of additional tacks, as usually there are far too few put in by the makers. Use them especially at the ends. This saves the annoyance of having to re-tack the shade on the roller in case of the careless handling which children often give them.

C. K. F.

The Bulkhead Door

THE bulkhead door, an inclined door, usually leading into the cellar, is usually a nuisance in country houses. Half of it is too narrow and to open both halves is laborious, for it is heavy. Some five years thinking on the subject resulted. when a new door had to be made, in two improvements. The first was to make one part of the door wider than the other. By opening one-half the space was wide enough for a man with a pail. When



The two sections of the bulkhead door were made unequal in width, with a balance weight for the wider panel

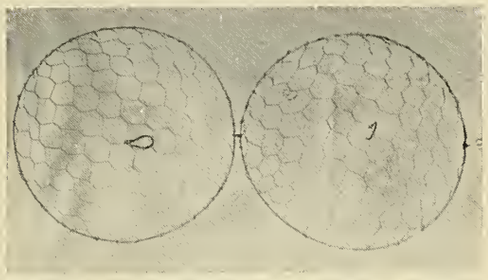
more room was wanted the other half was opened. This was one immense advantage. But the wide "half" was heavy. Then we balanced that half as the illustration shows. A corner of the house happened to be next the door, so it was only necessary to nail a block of wood to the house (we might have nailed it to a post), put a staple into it from which was hung a pulley, one of the swivel type. A staple was driven into the wide leaf of the door and a cord and weight arranged as shown. For a weight get a window sash weight at the hardware store, though any kind of weight will answer. To find how heavy it should be, find with a spring balance how heavy the door is when half way open. For a cord use a soft braided cotton line, about half an inch in diameter. Be sure to get a pulley or block that has a galvanized sheave in it. Iron rusts the rope and makes it break rather quickly. W. E. P.

The Care of Fern Balls

SO much interest has been expressed in the subject taken up in the last issue relating to the care and fertilizing of fern balls that the accompanying illustration of Mr. Joseph Elliott's method are shown.

Ingenious Devices

Labor-saving Schemes and Short Cuts in the House and in the Garden



Make a hemispherical wire basket for your fern ball to save bother from rotting strings

To get around the difficulty caused by the rotting of the string that bound the moss and fern roots together, a pair of hemispherical wire baskets were made and hinged together at one side with a wire loop. Into the hemispherical wire cage thus formed the fern ball is put and, needless to say, there was no further trouble in keeping the balls intact.

Fern balls are so often improperly nourished or entirely neglected that it is small wonder they do not make a better showing in most cases. The surprising thing is that they grow as well as they do. The best method of nourishing them is with liquid manure. A cheese-cloth bag

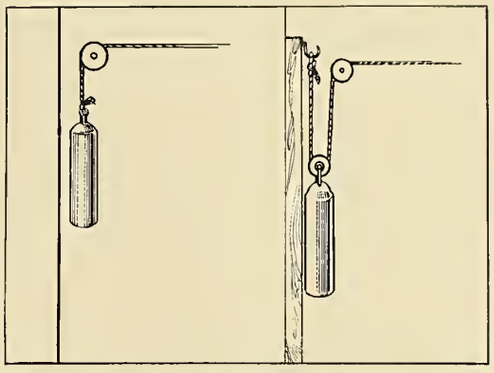
Suspend a cheese-cloth bag of manure in a pail of water, and in this allow the fern ball to soak up nourishment

is used for this purpose, filled with manure and allowed to soak in a pail of water as illustrated below. The fern ball is suspended in this liquid afterwards and allowed to soak several hours. When the ball has grown too large to put in the pail the liquid may be poured over it.

It is really useless to attempt to grow these fern balls without this liquid manure nourishment. They will not properly mature and will have to be renewed at frequent intervals. Mr. Elliott suggested also that when a fern ball is bought in the fall it is a good thing to bury it for a month before letting it start to grow in the house.

Halving the Pull of a Given Weight

SOMETIMES the weight used to close a door or a gate is too heavy, and it is not convenient to get one lighter. If you have a spare pulley that you can



To halve the pull of a weight merely insert an additional pulley as indicated

fasten to the top of the weight you can cut the *weight* in two by lengthening the cord and carrying it through the pulley fastened to the weight as shown in the ilustration. The same weight is supposed to be used in both figures, but it will pull only half as hard in the second one as in the first. W. E. P.

Store-Room Under the Porch

ON a small city lot where there are no out-buildings, and but little storeroom in the basement, space for the garden implements, out-of-door games and the paraphernalia of two small boys was provided in the following manner: The space under the back porch was sided and floored with material from dry-goods boxes, and a door and two small windows made. Here was a dry clean space capable of holding many things. Under each of the porch steps a drawer was made, these arranged, of course, to open towards the inside of the enclosure, giving a safe shelter for the many small things that are easily lost. This arrangement kept both yard and cellar neat and orderly. ALICE M. ASHTON.

Inside the House

Timely Suggestions and Answers to Correspondents

The Editor will gladly answer queries pertaining to individual problems of interior decoration and furnishing. When an immediate reply is desired, please enclose a self-addressed stamped envelope

New Oval Frames

IMPORTERS are showing oval picture frames of gilt material, designed to appear as though suspended from the wall by a bow and strings of ribbon. The bow-and-ribbon effect is obtained by the modeled gilt.

Cedar Chests

THE newest things in cedar chests for the summer home are those constructed in settee form. For cottage use they lend themselves admirably to being placed in an entry hall and are doubly useful in this new form. Miniature chests are also made for storing feathers.

Basket Candelabra

SILVERSMITHS are exhibiting candelabra in several new forms. Among them are the four-armed table candelabra, each arm of which suspends a silver basket of the same pattern in which bon-bons are held. These are very beautiful for the small dining-table.

Wicker Bird-Cages

FASHIONS for birds seem to be keeping pace with fashions for their owners. The latest things shown are wicker cages for doves, parrots and other large domesticated birds where a fine-mesh cage is not necessary. These wicker cages are very attractive and comparatively inexpensive. They are modifications of the old magpie cages familiar in the illustrations to fairy-stories, where a magpie in such a cage is always to be found hanging outside the witches' doorway.

Making a Gold Screen

WE had a Japanese four-fold screen, with embroidered pheasants on a black ground on one side, and plain diaper-pattern on the other, after the fashion of all these cheap Japanese screens. As an experiment we procured sheets of Japanese gilt paper (such as one sees on packages of fire-crackers), and we cut them up carefully into squares four inches each way. Laying the screen open flat on the floor (black side down), we spread a paste of starch (not very thick, and free from lumps) over the plain-patterned side, a section at a time, pressing each square lightly with a cloth. The squares must of necessity overlap, and therefore the edges of the squares already laid must be paste-covered, one at a time, so that succeeding squares will all be stuck down and no loose edges rising to catch and tear. As the paste should be very thin, it makes little difference whether or not it passes over the gilt surface of the laid squares. A damp cloth will remove it later. When all the panels are covered this way the effect will be that of a screen of squares of gold leaf, such as one sees in expensive shops. We have used our screen four years now and it is admired by everyone. K. G. C.

Papier-maché Flower Vases

PAPIER-MACHE milk jars, seven and a half inches high by three inches in diameter, are now being made and sold by nearly every grocer for five cents a piece, or less. Covered with shellac, they make excellent receptacles for holding cut flowers and a little ingenuity in painting, staining and stenciling them will turn them into very decorative adjuncts to the furnishings of the summer home, where there seem never enough vases of the right sort to hold the wild flowers, ferns and garden flowers one wishes to bring into the house.

The conventionalized Iris pattern that was used in stenciling the living-room illustrated in detail on the next page. The actual width of the group is 8½ inches

Lavender Keeps Out Moths

I HAVE found, in putting things away for summer storage, that flat bags of lavender keep moths away as efficaciously as anything else I have ever tried. Moreover the lavender method has the advantage of fragrancy against the disagreeable odor of camphor and tar balls.

M. J. C.

Staining Burlap Panels

WE have a five-room apartment, the dining-room of which has a wainscoting running up seven and a half feet. The woodwork is oak, stained black. Everything about the room is good except paneling of red burlap, which the previous tenant had put in the wainscoting. The landlord will not go to the expense of substituting a more harmonious color, and I am writing to ask if you can suggest any way of covering it that will not be too expensive or clumsy. We have a lease for only one year, so we do not wish to expend any more than necessary.

L. C. W.

You will find that if you coat the offending red burlap with black wood-stain (Flemish oak), the result will be a blue effect so dark as to be almost black but not at all funereal in appearance. The same treatment can be applied to the bright green paneling that apartment landlords seem to enjoy inflicting upon their tenants.

Panels for a Child's Bookcase

IN our playroom our children have a case for their books in which there are four blank panels across the top. I got a cabinet-maker to remove the moldings and carefully place therein four colored pictures I cut from a twenty-five cent copy of Walter Crane's illustrations

to *Little Red Ridinghood*. The four colored panels were then varnished and the moldings replaced. The children are delighted with it, and as Walter Crane's colored drawings are to be had in these inexpensive books, it occurs to me that this will suggest another decorative use for them in nursery and playroom.

E. T.

Old-fashioned Wall Paper

THE wall paper in our house, which is an old Colonial one in excellent preservation, was until recently, in very good condition, the large hall having had very quaint old-fashioned patterned paper with little landscape medallions in gray for its design. This paper was a very old sort, and I am writing to ask if anything like the old-fashioned patterns may be obtained nowadays?

N. R.

One may obtain just the sort of paper you desire, at various prices up to $2.50 a roll. At this latter price there may be had, from the firms whose address has been sent you, a lovely gray paper with greenish-gray medallions of pastoral scenes. Then there is a cheaper paper with mythological scenes in gray relief, and a lovely "Shepherdess" pattern in warmer grays. Indeed one will find many reproductions of old-time wall papers in the market to-day, and they are just the thing for the walls of Colonial rooms.

One Stenciled Pattern Throughout a Living-Room

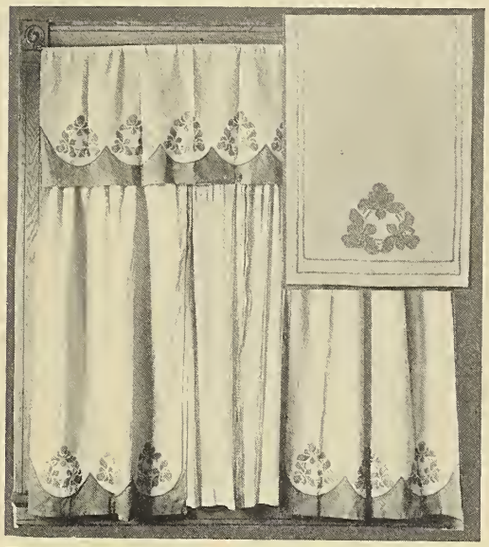
THE hangings for the living-room here pictured were of rough linen in its natural pale brown tint, and domestic monk's cloth in the same color.

The conventionalized Iris-group was stenciled on these draperies in dark blue, the medium used being a dye that comes in large tubes and can be mixed with boiling water and kept from running by a slight intermixture of mucilage. "Cadet" and "navy" blue were mixed to get the desired shade.

The portières were stenciled in dark blue upon ecru monk's cloth. Dark blue mercerized couching cord marks the center of each Iris and helps to form the border

The broad windows in this room were curtained in plain cream-colored scrim; but the side curtains and valance were of linen in its natural color. The long side strips were made very full, while the valance above was made of a straight strip of the linen, 25 inches deep and 2 yards long.

Five inches above the lowest edge the Iris-figure was stenciled on the linen, a space of 2½ inches being left between the lower portions of each of the triangular figures. A deep border of solid blue was then painted on, so arranged as to fit in deep scallops between the flower-groups. To do this, a piece of stencil paper was cut in large scallops, 4½ inches deep and 11 inches wide, and these scallops were then laid *over* the Iris-groups, and all the material extending below the scallops, painted blue. In the same way, by pinning a straight strip of stencil paper an inch from the edge, a straight dark border was stenciled up the sides of the curtains.



For the natural linen curtains a scalloped solid blue border was used. The smaller illustration is of the table scarf

The scalloped border and dark side borders were then outlined with dark blue mercerized couching cord.

On the couch-cover of ecru monk's cloth the stenciled figure was arranged as an "all over" design; the Iris-group being dotted at regular distances over the entire surface. A border was formed by making two rows of closely clustered flower-groups, with a solid band of dark blue painted along the edge. This solid border was four inches deep, except where the stenciled figures came; the scallops that were used in the curtains being here laid over each flower group, narrowing the solid border beneath.

This solid band was outlined by a dark blue mercerized cord, and the centers of each flower marked by two stitches of the couching cord to give them a bit more life.

On the couch cover the stenciled pattern appears on monk's cloth with a solid blue border

On each of the portières the Iris-figure was arranged as on the couch cover; and the centers of these blossoms also marked by two stitches of the heavy cord. But the portières had no solid blue band painted on as a border; lines of the couching cord alone setting the border off from the rest of the curtain.

A table scarf was made of a strip of monk's cloth, with the Iris motif stenciled on each end. In this case the whole figure was outlined with the heavy blue cord, which also marked the hem at the sides and ends of the scarf.

Curtains for the built-in bookcases were also made of the monk's cloth, with the stenciled figure painted in a close border just above the hem. The couching cord marked the top of this hem, and ran up the inner side of each curtain.

HARRIET JOOR.

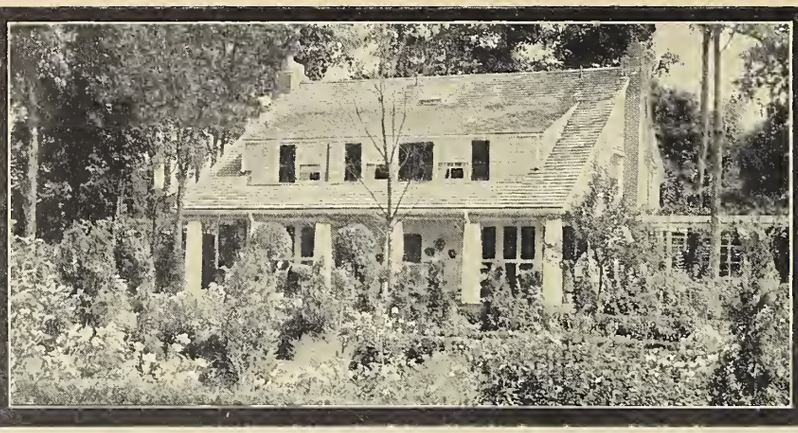
A Problem in Bedroom Furnishing

WE have just bought a cottage in the country on a quiet road half a mile from the village. I want to make the three sunny bed-chambers bright and attractive, and it has occurred to me that the English chintz styles, of which I have read, would be appropriate. The rooms are all very large, and we have a lot of old-fashioned mahogany furniture (four-posters, etc.), with which to furnish it. Will my suggestion be all right?

E. V. R.

If your rooms are large and cheerful and sunny you could make very attractive bed-chambers by painting or enameling the woodwork ivory white, tinting the ceiling to correspond, and papering the walls with one of the many wall papers now on the market to accompany chintz fabrics. We send you the addresses of dealers who make a specialty of such wall papers and chintz fabrics to match. These papers cost from fifty cents up per roll, and the chintz from fifty cents up per yard. However, the fabric is of good width. This season wall paper manufacturers are also showing delightfully designed papers of English make, patterned with quaint sprigs of bright old-fashioned flowers, unlike anything that has been on the market before. Possibly some of these papers would appeal to you. They should be used with monochrome curtains.

Garden Suggestions and Queries



Edited By Gardner Teall

The Editor will be glad to answer subscribers' queries pertaining to individual problems connected with the garden and grounds. When a direct personal reply is desired, please enclose a self-addressed stamped envelope.

June's Reminder

WATCH the Currant-worms on Currants and Gooseberries, Rose-beetles on Roses, Grapes, Plum and Cherry trees.

Perilla, Dwarf Nasturtiums and Portulaca may be sown late in the month in half-shaded places to take the place of failing annuals.

Transplant Tomatoes, Celery and Peppers.

Sow for late crops beets, carrots, potatoes, and for succession radishes, sweet corn, beans and turnips.

Spray for garden pests—insects and blights (see spraying table on page 100 of HOUSE AND GARDEN for March, 1910).

June is the critical gardening time—you must weed and cultivate carefully and persistently for successful results.

If you have a pond or stream on your country place, planting it with water-lilies and other aquatic plants will be worth while.

Look out for cut-worms in your garden beds. Use Arsenate or Paris green on pigweed, peppergrass and mullein as "baits," distributed between the rows of plants at nightfall. Fresh "baits" are the most efficacious.

Privet hedges may be trimmed this month.

Plant Dahlias and Gladioli.

Begin to tie up tomato vines. This is a matter that ought not to be neglected.

Tender annuals planted after June first, will develop with wonderful rapidity.

Set out Cabbage and Cauliflowerplants in rich soil. Well drained clay soil is best for cabbage.

When Small Fruits and Trees Bear

HOW long should it take the Blackberry, Currant, Gooseberry, Raspberry, Quince, Plum and Strawberry plants I set out last season to bear?

Blackberries, Currants, Gooseberries, Raspberries and Strawberries should yield fruit one year from setting, and bear good crops in from two to three. It will take the Quince two years, and the Plum three years from setting to bear.

Wax Plants

A WAX plant has just been given to me and I should be glad to know something about its growth and habits, and about the proper soil for potting.

This plant (*Hoya carnosa*) is a summer-blooming plant not difficult to cultivate. Let your new plant rest through the winter, in a temperature of about 50° if possible. In the spring give it plenty of sun and air. For potting-soil use loam, leaf-mold and lime-rubble or sand. The Wax Plant will attain considerable height under proper care, producing attractive sweet-scented clusters of star-shaped flowers of waxen textures. When the flowers have bloomed do not cut off the spurs as these bloom again.

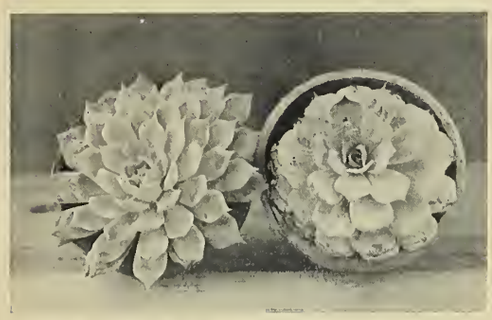
The Balsam

ONE of the loveliest of old-fashioned garden flowers is the Balsam (*Impatiens Balsamina*), often called Lady's Slipper, an annual that has suffered strange neglect, when one takes into account the beauty of its flowers and foliage. It thrives best in moist ground and will reach a height of eighteen inches or more. As it flowers from July to frost it should find favor in every garden. Balsams are excellent border plants, and may also be grown successfully in pots and in window-boxes.

Hen-and-Chickens

THE plant commonly called Hen-and-Chickens (*Sempervivum globiferum*), also is called Houseleek, is a hardy perennial, stemless, and rosette in appearance, with succulent leaves, cultivated for carpet-bedding, rockeries, and adapted to covering sandy waste spots. As carpet-bedders they are more thrifty than the more tender Cotyledon (known to the

The Balsam is one of the most satisfactory annuals for color, border and mass effects and for small gardens.



Hen-and-Chickens (*Sempervivum globiferum*) is an interesting rosette-formed plant useful for carpet-bedding

the Houseleek is the *S. tectorum*, the little plant seen growing on the roofs of so many of the cottages in Europe. The multitude of young plants of *S. globiferum* that spring from the parent plant are attached thereto by slender threads. One often sees earth filled kegs pierced with numerous holes in which *Sempervivum* plants are rooted, forming a foliage covering as a garden ornament.

Edgings for Garden Walks

ONE may have many varieties of edgings for the garden walks which about this time he will be planning, but there is not a better one to be recommended than a strip of turf, if carefully laid and well kept up. Sods of good color, smoothness, regularity and durability are most pleasing, and though somewhat formal, present an appearance unsurpassed in neatness.

Grass edging, moreover, furnishes the best ground-tint for setting off the colors of flowers. An edging of this sort should invariably be flat and of uniform height above the surface of the walk it borders. The grass edging should not be more than three-fourths of an inch above it on the walk side but about two inches high on the side of any flower or shrubbery bed it edges, to allow for the resistance of soil washing against the sod.

The grass edging must not be too narrow or it will crumble away.

W. R. GILBERT.

Plants Suitable For Sunny Rock Gardens

WILL you kindly tell me what bright-colored plants would prove suited to a little rock-garden I am planting for a sunny spot in my garden. Will things grow there?

Sunny spots are all right, for the rock-work itself forms sufficient shade for the plants that require it. The following plants are good for sunny locations: *Aubrietia, Alyssum saxatile, Arabis albida, Œnothera cæspitosa, Oxalis corniculata atropurpurea, Saxifrage, Sedum, Nepeta glechoma, Linaria cymbolaria, Ramondia pyrenaica, Primula, Campanala pussilla, Veronica gentianoides, Helianthemum Canadense,* and *Hypericum Hookerianum.*

A Hedge of Vines

WE have an old hedge, four feet high, that long ago died out leaving nothing but a brush of branches and twigs. Could we not cover it this season and next with some sort of vine that would grow rapidly and be attractive?

Try *Clematis paniculata.* The accompanying illustration will indicate the beauty of a growth of this vine, which, in its second year transformed the dead hedge row into a wall of flowers and foliage.

Replenishing the Aquarium

THIS is a season for replenishing aquarium plants, which are so necessary to the life of goldfish and other inhabitants of either the globe or tank aquarium. These plants supply oxygen so the fish may thrive, and the poisonous carbonic gases the fish exhale are taken up by the plants. Many persons have wondered why the fish in their aquaria have seemed to die off without reason; probably they had not thought of introducing aquatic plants, or had regarded such as merely ornamental attributes. The following are some of the plants that may be recommended for aquarium purposes: Cambomba (*Cabomba caroliniana*), also known as Fanwort; Water Milfoil (*Myriophyllum spicatum*); Sagittaria (*Sagittaria natans*); Ribbon-grass (*Valisneria spirals*); Arrow-head (*Sagittaria sagittifolia*); Willow-moss (*Fontinalis antipyretica*); Potamogeton (*Potamogeton perfoliatus*); Salvinia (*Salvinia natans*); Water Starwart (*Callitriche verna*); Water Cress (*Nasturtium officinale*), and Hornwort (*Ceratophyllum demersum*).

Try some of these in your aquarium and you will be surprised at the change they will make in the health of your fish.

Clematis (*Clematis paniculata*) will form an attractive covering for training over an old hedge

Weeds in Garden Walks

THE walks in our garden are made unsightly by the weeds which spring up there every season. How can these be kept down?

If you cannot have your garden walks made over (and that really is what should be done, by sinking a layer of stone filled in with cinders or coal ashes as a foundation), make a hot brine of salt and water in proportions of one pound of salt to one gallon of water, and apply from a watering pot. Another method is to apply a solution of one ounce of carbolic acid to every gallon of water, and sprinkle as you do by the hot brine method. This mixture is efficacious for removing ant-hills.

A mass of tall growing perennials against a growth of shrubbery may be bordered effectively by a strip of raised turf a foot wide

Insect Helpers

BY GRACE TABOR

WE are so constantly impressed by warnings, displayed everywhere, against malign little monsters, that our every instinct becomes destructive when our thoughts are turned to those animals which, according to a very great man's very profound classification, are the highest of the six divisions which compose the animal sub-kingdom known to science as *Annulosa*—the division grouped under the head *Insecta*.

And so we are in danger of never knowing about the benign little allies which this group contains — and in still graver danger, through our ignorance, of destroying them, along with "varmints" generally. Such destruction is very much what the destruction of horses and cattle and sheep and dogs would be, if we proceeded to slaughter all animals because tigers and wolves and panthers and other savage kinds were inimical to the life and comfort of man.

Quite as the faithful sheep dog defends a flock against invading foes does the dainty lady-bug defend certain other of our possessions against marauding enemies—and though in the interests of truth and honesty I suppose we must confess that she does it unconsciously, she nevertheless does it very well, *and as nothing else* can do it.

And quite as the patient horse fetches and carries for man from morning until night, the active bee fetches and carries also, performing a service so great and so important that without it only a comparatively small percentage of man's fruit foods would ever be produced at all. She serves while serving her hive, to be sure—but we are none the less dependent on her.

These two small creatures—the lady-bug and the bee—are examples of the dual service which many of their great group render to the lords of creation—without the said "lords," by the way, having anything to do about it—and as such examples let us see just what it is that each does.

OUR FRIEND THE LADY-BUG

The lady-bug, in the first place, is not a bug at all, but a beetle—that is, an insect of the sheath-winged order. These have two pairs of wings, the outer always hard and armor-like, and closing down over the thin and folded, membraneous under pair. (True bugs do not have these sheath wings but only gauzy ones; some indeed are devoid of wings altogether and can only crawl or run about.) And like most beetles the lady-bug is predaceous—is in other words, a preying, carnivorous little savage who devours with rapacious appetite other insects, her preference for those of the scale class being especially notable. This taste in food therefore is the reason of her value to man; in feeding herself and depositing her eggs where the newly hatched larvæ will find their favorite dish ready and waiting to be eaten, she brings destruction to unbelievable hordes.

THE SERVICE RENDERED BY THE BEE

The bee belongs to another class entirely — a class of thin-winged insects which have mouth parts made both to bite and to suck. But bees are far too well behaved to bite, though some have been accused of it. Bees are nectar-drinkers—and it is in sipping and seeking nectar that a bee accumulates on her legs and her body the "flower dust" which marks her as a long summer day traveler.

This flower dust is the real gold of the flower kingdom — the magic, life-laden pollen grains, one of the most precious of the unknowable mysteries of Nature's laboratory. On the bee's body they travel from one flower into another and from the flowers of one plant into those of another, thus accomplishing that miracle of cross pollination which Nature, for some deep reason, demands.

THE SIZE OF THE INSECT WORLD

Insects help us, therefore, in two ways: directly, by destroying our fruit enemies, and indirectly by being the instruments of this curious exaction termed cross pollination or fertilization. And there are many kinds of insects working in both classes—so many that it is hardly possible to even hint at their numbers or their wonderful life stories here.

For experts place the total number of different kinds of insects in the world at from two to ten million; and of this number only about four hundred thousand have so far been examined, described and named. Four-fifths of all the kinds of animals are insects—and some *single families* contain more species than a person of normal vision can see stars on a clear night. It is believed, too, that the greater proportion of animal matter on the globe's land surface exists in the form of insects —in other words, that if all the insects on the land could be piled in one enormous heap, with all the rest of the animal kingdom, man included, piled in another, the mountain of insects would be larger than the mountain of animals and men!

HOW TO KNOW FRIEND OR FOE

Out of these legions it would be difficult to select all of those who are indeed friends to the human race, even if the entire insect world were known. But with anywhere from three-fourths to twenty-four-twenty-fifths of it, according to the correctness of the estimates, still in the darkness of the unknown, it is of course impossible. And it is almost impossible to devise any rule which shall help the layman in determining which of the known insects are which — though one does suggest itself as the food taste and habits of the various kinds are considered.

It is based on the fact that insects are seldom or never truly omnivorous. They either eat meat or they eat vegetables—or suck the juices from one or the other —but the same insect does not indulge in both. The meat eaters, therefore, being the warrior-hunters or beasts of prey of the insect world, are man's friends; the vegetarians his everlasting foes. This seems likely to be a fair standard of judgment for all those who aid man directly, and from it one formulates a plan of action, limited to be sure, but pretty certain to be all right as far as it goes. So the rule is never to destroy any kind of insect creature that is ever caught in the act of destroying another.

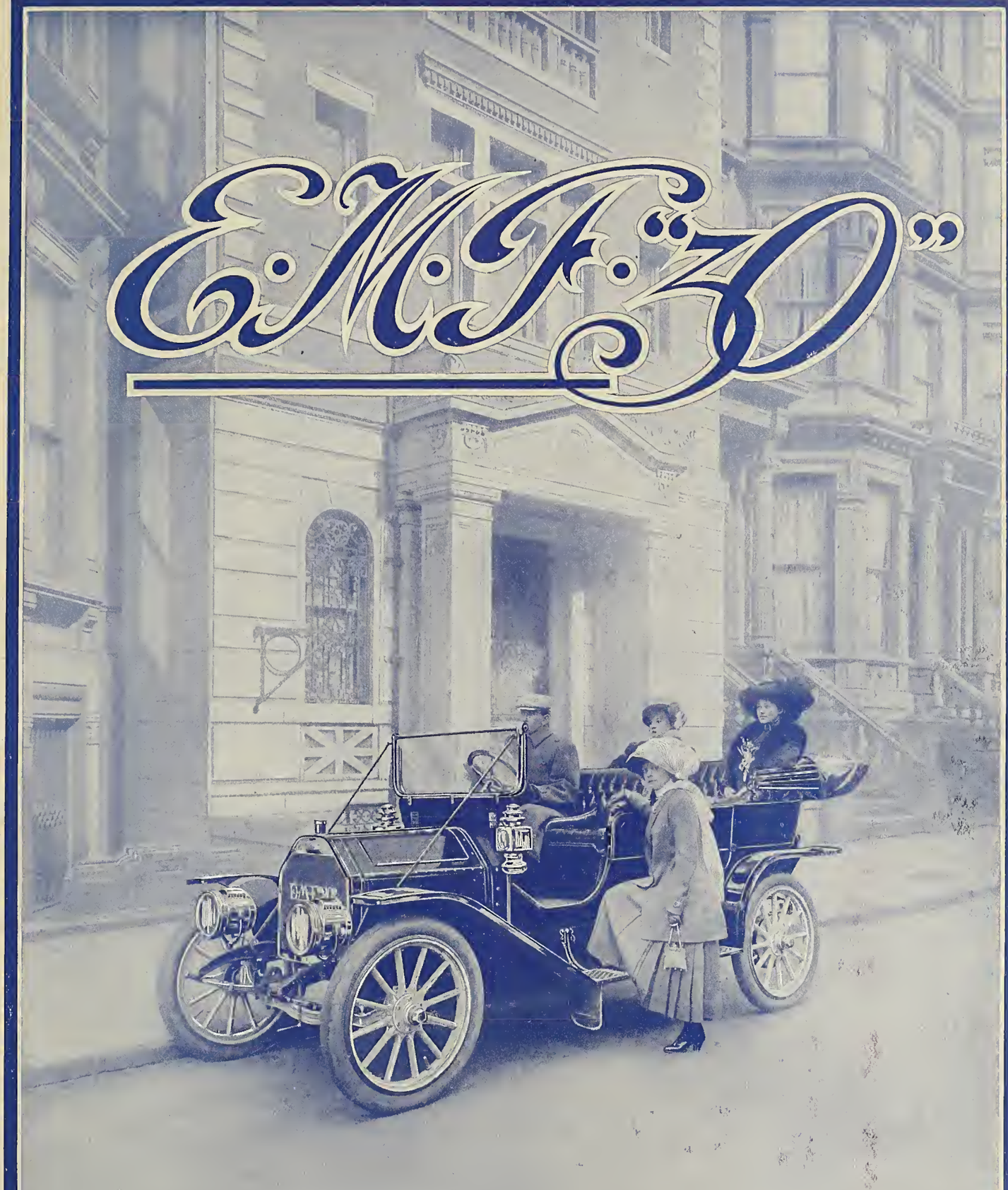
Compassion must be leashed with the strong reins of indifference at the writhings of a Cut-worm in the cruel mandibles of a Ground-beetle, or the frantic terror and agonizing struggles of a baby pear-tree Psylla when the "veritable dragon," which is the larvæe of the Lace-leaf fly, seizes it between its pair of great sucking tubes preparatory to drawing the life fluids from its body. These things must not be discouraged, no matter how unpleasant they are to witness or to think of—else the Cut-worm will lay low his harvest and the Psylla will pump the life from the defenseless trees.

Bees are much pleasanter creatures, to all outward appearances at least—they behave atrociously to their own kind—and, aiding indirectly as they do, they are not of course to be measured by any such distressing and murderous test; in fact, bees we already know as friends.

SPRAY WHEN THE BLOSSOM PETALS FALL

No spraying or poisoning should ever be done when bees are at work, and nothing that will injure them should be used on fruit or ornamental flowers at any time when they are in evidence. The regulation time for spraying will not interfere with "bee pasturage" if strictly adhered to, as the bees are seeking nectar before the flower has been fertilized, consequently before the petals drop. The falling of the petals is the signal for the first application of all those sprays which aim at the destruction of worms — the larval forms of numerous creatures which are deposited, in the egg, at some point within the flower and thus work from the "blow" end toward the center of the fruit—and these sprays should never be used until this signal is observed.

E.M.F. "30"



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